

Study Series



AL-FURQĀN
ISLAMIC HERITAGE FOUNDATION
Centre for the Study of Islamic Manuscripts

Research Articles and Studies
in honour of
Iraj Afshar

Edited by

Ibrahim Chabbouh & François Déroche

ISBN 978-1-7881469-4-4



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ISLAMIC HERITAGE FOUNDATION

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First Edition: 2018 CE / 1439 A.H.

ISBN: 978-1-78814-694-4



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In the name of Allāh, the Beneficent, the Merciful

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In the name of Allah, Most Merciful, Most Compassionate

FOREWORD

All praise is due to Allah, Lord of all creation, Guide to the path of rectitude, and peace and blessings on the seal of the Prophets, his family, companions, and all those following his guidance and adhering to his practice to the Day of Judgement.

INDEED, ENLIGHTENED NATIONS are ones that recognise the rights and stature of grand personages, preserving their legacy, immortalising their life and work, and marking their contribution with respect. One such rare genius is the erudite and illustrious scholar, the late Iraj Afshar – God’s Mercy upon him.

Our remembrance of this gifted scholar, endowed with encyclopaedic knowledge, is tribute to his vast contribution to the service of our heritage. Moreover, we and an entire generation of scholars and researchers acknowledge our great debt to him.

This in memoriam work titled *Research Articles and Studies in Honour of Iraj Afshar*, is in appreciation of his stature as a unique trend in our contemporary history; one deserving eulogy, praise, commendation and testimonial, in recognition of his scholarship – principally his lifetime service dedicated to science and culture, into which he poured all his effort and energy. In addition, he was a virtuoso thinker, conscientious researcher, and sharp editor – multifaceted and diverse in his skills. It is my pleasure, in the name of Al-Furqān Islamic Heritage Foundation, to present this work to researchers concerned with Islamic heritage and its scholars.

This book is a compilation of articles and studies written in Arabic, Persian, and English. Some relate to the scientific and practical life of the

erudite, eminent scholar and historian, the late Iraj Afshar, while others relate to the science of codicology. These were authored by a group of his devotees and those cognisant of his favour, and are offered as a gift, and sign of their respect and gratitude. Within this book, the reader will find this eminent scholar's bibliography, and selected photographs showing distinct stages of his life.

The late Iraj Afshar is an example of a rare scholar within a distinguished company of geniuses in the Islamic world in the modern age. He is a renowned historian, cataloguer, and expert in Persian manuscripts. He was also a biographer, author, and man of letters. In the discipline of Iranian studies, he is recognised as a credible and rich reference, accredited in many Western and Islamic circles.

My dear brother, Iraj Afshar, was a friend close to my heart, and my relationship with him was strong and lasting. In addition to being a leading and erudite scholar, he was endowed with rare human quality. Therefore, when I established Al-Furqān Foundation, he was at the forefront of those who formed its Board of Experts. With his death, we lost one of our prime pillars, and a peerless scholar, who had worked in the world of manuscript heritage throughout his life – teaching, practising, and authoring. Iraj Afshar's genius shone in the area of codicology, in which he garnered the lion's share; indeed, he soared high in its dizzying heights, providing the Foundation with continuing prolific output in this area. Moreover, he constantly encouraged the matter of surveying, documenting, cataloguing, publishing, and scientifically editing the Islamic manuscript heritage, as well as researching means of preserving and maintaining it. He made unique scientific contributions to the training courses on cataloguing convened by Al-Furqān Foundation, where he worked with untiring resolve, and unrelenting effort to promote the world of manuscripts in the aspects of codicology, palaeography, and cataloguing. His papers submitted to Al-Furqān's conferences relating to the critical edition of manuscripts were unique, and his efforts quite tangible. He tirelessly promoted the process of cataloguing manuscripts and training cataloguers and editors from the younger generation, given that their numbers had dwindled, to near rarity.

The late Iraj Afshar is considered a treasure in the sphere of knowledge and literature in Iran, and he was unsurpassed in the science of

palaeography and manuscripts. Afshar enriched the heritage space with prolific and continuous output. Moreover, his sound scientific works were distinguished by depth, skill, and erudition. He was also fluent in English and French.

Afshar was quiet, and economical in his words. However, if asked to present his opinion, he would awe minds with the elegance of his evidence, sound intellect, precise articulation, powerful expression, and amazing selectiveness of words. He was a special person, unique in his knowledge, culture, opinions, manners, generosity, humility, as well as unstinting giving. He was also a clever, modest, and simple man, with a burning passion and sharp intellect. He embodied high zeal, quick wit, agile resolve, with stamina and patience in the field of scientific output.

The Foundation has dedicated this modest gift, representing a set of studies, to this now extinguished beacon of Islamic heritage, our teacher, the late Iraj Afshar. Perhaps with this effort, we are able to repay some of our debt to him.

I ask God, the Almighty, Most High, to reward the authors of these studies, researches, and articles generously for their efforts. In particular, my gratitude to my kind brother, Dr Ibrahim Chabbouh, for his valuable labour in editing the Arabic articles and studies, presenting these in elegant form. I am also grateful to Dr François Déroche for editing the English chapters of this work. I also wish to express my thanks to all those who contributed, in small or large measure, to the successful completion of this work.

Finally, I ask Allah, the Almighty, Most High, to accept our teacher, Iraj Afshar, in His All-Encompassing Mercy; He is indeed All-Hearing of our supplications, and Most Generous in His reward. We ask Him to make our effort solely and sincerely for His sake; indeed, God is the object of our intention, and He is the Supreme Lord and Ally.

All praise is to God, Lord of all creation.

H.E. SHAYKH AHMED ZAKI YAMANI
Chairman, Al-Furqān Islamic Heritage Foundation

I

Iraj Afshar, As I Knew Him

EKMELEDDIN IHSANOGLU

(Member of Al-Furqān Foundation's Board of Directors)

"Never dieth that one whose heart is alive with love."

Hafez, the famous Iranian poet

Iraj Afshar (1925-2011) was one of the greatest scholars of Iranian studies, a historian, bibliographer, Persian manuscript expert, biographer and writer. His father, Dr. Mahmoud Afshar (1893-1983), was also an influential Iranian intellectual, writer and poet, who was fond of Iranian literature and culture and devoted his life and the major part of his personal wealth to the promotion of Persian culture and literature. The 'Mahmoud Afshar Foundation', which he founded, played a major role in realising the dreams of both father and son in serving cultural purposes.

During the years of his fruitful life, Iraj Afshar worked tirelessly to promote Iranian studies. He always called himself nothing but a servant of Iranian and Persian culture. His popularity, however, was not limited to the geographic borders of Iran. The sophistication of his works and the depth of his love for Persian culture and Iranian studies made him a world-class Iranologist who had broad worldwide connections with eminent scholars in the field of Iranian studies.

I had the wonderful opportunity of knowing Professor Iraj Afshar. I collaborated with him for more than two decades. In fact, our

serious work-related interactions began at the time when 'Al-Furqān Foundation' was first established, back in 1988.

'Al-Furqān Foundation' was established to document and preserve Islamic written heritage and conduct various activities in this domain. During my years as Director General of the Research Center for Islamic History, Art and Culture (IRCICA), a subsidiary of the Organization of Islamic Cooperation (OIC), I served alongside Professor Afshar as a member of the Board of Experts of 'Al-Furqān'. As such, we were in frequent touch, as a result of which a friendship arose between us.

Prof. Afshar had a rich track record in various fields of knowledge. Aside from his teaching activities and work as a librarian in several Iranian academic centres, he wrote and edited hundreds of books and thousands of articles. No doubt others would agree with me that it would be difficult to find anybody in Iran so prolific in researching Iranian history and culture. He left a vast and invaluable legacy of documents, notes, articles, memoirs, books, photos and texts the likes of which few other contemporary Iranian researchers have produced.¹

However, Iraj Afshar impressed me most with his work and research on Iranian and Islamic manuscripts and the way he methodically catalogued them. Based on my own personal experience in the cultural field, I would even consider Iraj Afshar a seminal authority in the field of Persian manuscripts. He was so kind as to send me copies of his books relating to manuscripts as soon as they were published.

During the last two decades, I had several occasions to meet Professor Afshar in London, Istanbul and Tehran and discuss with him, at length, issues of mutual interest. Since assuming the post of OIC Secretary General in 2005, whenever I happened to visit Tehran I would take the opportunity to meet Professor Afshar, or at least exchange a phone call with him.

Iraj Afshar had a genuine passion for scholarly work, particularly for cataloguing manuscripts. In fact, nothing could confine his intellectual curiosity. As a person whose life was literally centred on books, he devoted himself and his life entirely to research, reading, writing and editing, so much so that never once did I hear him talk about politics. I know that he used to routinely exercise; in fact, he was a master in mountain climbing. No wonder, then, that he could sustain his good

physical shape until the end. He was also an elegant man. Among all my old, Iranian friends, Iraj Afshar and Professor Mohammad-Taqi Danesh-Pajouh, were the only two who always wore ties. Iraj Afshar had an amazing memory which remained sharp until the last days of his life. My last conversation with him was over the phone just a few weeks before he passed away. He was mentally alert and, like other times, he talked about his latest research work.

Iraj Afshar was well connected with most centres of Iranian studies in Europe and the United States. You can hardly find any Iranologist who would undertake his research without referring to his publications, make use of his works or seek the personal help of Iraj Afshar. Equally, Iraj Afshar had a very deep respect for, and continuous contacts with, all those who were interested in Iranian culture and history. His reputation and trustworthiness made many people who owned manuscripts and historical documents trust him with those documents for publishing. Iranian and Islamic manuscripts can be found extensively in Europe, the Americas, Asia and other parts of the world. To my knowledge, Professor Afshar succeeded in cataloguing Persian manuscripts in some western libraries, including Widener Library of Harvard University, the Austrian National Library and the Austrian State Archives.

Iraj Afshar was certainly a hard-to-replace asset for the advancement of studies on Persian and Islamic manuscripts. As these documents have always been in great danger of being damaged or lost, due to natural causes or human negligence, the work which was done by Professor Afshar in preserving this heritage is highly appreciated. Moreover, I know that Professor Afshar did it all with love, perseverance and dedication.

In the 1990s, the IRCICA, in co-operation with 'Al-Furqān Foundation', held training courses for cataloguers in Istanbul. The main objective of the courses was to provide young cataloguers and librarians with a broad culture and scholarly background in the handling of manuscripts. Cognisant that the skills for cataloguing manuscripts are gradually disappearing, Al-Furqān has always strived to recruit a core teaching staff of highly qualified and seasoned professionals to teach the courses. Professor Afshar was one of the staff who helped a great deal in

this endeavor. In fact, he was always ready to attend any activity related to the cataloguing of manuscripts. Above all, Iraj Afshar was extremely keen to share his knowledge with others without setting conditions or making exceptions.

In the year 2000, on the occasion of the 20th anniversary of IRCICA, the third group of the IRCICA Award for Excellence in Research was presented to the recipients. Professor Iraj Afshar was one of the awardees in recognition of his masterly accomplishments in the fields of Iranian studies and Islamic history.

Iraj Afshar's life marked a unique episode in creative scholarship and humanism. Through his uncanny erudition and invaluable academic contributions, he not only bequeaths a treasure trove of knowledge for generations to come but will also certainly inspire Iranologists and other scholars to produce the level of enlightened scholarship that he so brilliantly promoted for an entire lifetime.

Iraj Afshar, although he is no longer physically amongst us, will always stay alive in our minds and hearts; *in his heart indeed was a fire that would never die.*

NOTES

¹ I had the unique opportunity of being presented a copy of his published corpus as compiled by his sons, covering the years 1944-2002. The encyclopedic breadth of his knowledge and academic interests would certainly surprise anyone who reads the book.

Iraj Afshar's Life and Contribution

MEHDI BAGHI
(Researcher)

Iraj Afshar doyen of Iranian studies, bibliographer, codicologist, cataloguer, editor, writer, historian, and university professor. He is one of the most influential Iranian contemporary scholars to have lived. Among the wide range of academic activities that he undertook included publishing academic journals and books, contributing to an array of periodicals, preparing bibliographies, cataloguing, codicology, teaching Iranian and Qājār studies at institutions in Iran and abroad, and collaborating with numerous research institutes and libraries.

FAMILY BACKGROUND, LIFE, AND CONTRIBUTIONS

He was born on 8 October 1925 in Tehran to a cultured family from Yazd. His father, his uncle, and some of his relatives were affluent merchants. His father, Maḥmūd Afshār Yazdī, was an educated and patriotic character, who began his early education in India where he studied for three years. He later studied political law for seven years in Lausanne, Switzerland, obtaining his Ph.D. He also wrote and published patriotic poetry.

Maḥmūd Afshār published the *Āyandih* (Future) periodical to which a number of distinguished figures contributed articles, including: Muṣaddiq, Taqizādh, Ḥikmat, Šālih, Narīman, Šadiq A'lam, Jamālzādh, Kāzimzādh Irānshahr, and Ḥusayn Navvāb. Indeed, Iraj Afshar's birthdate actually coincides with the publication of this periodical. Iraj thus had the privilege of being raised under the auspices of a kind and learned father, whose friends, colleagues, and acquaintances included distinguished scholars, men of letters, journalists, and politicians.

His family's associations with some of the most distinguished scholars and political figures did not lead Iraj Afshar to the political arena. In contrast, impressed by his father's love for Iranian culture and civilization, he devoted all of his life to Iran and its cultural heritage. Raised in a family of constitutionalist and freedom-seeking scholars – like his father, whose acquaintance with Muṣaddiq (Mosaddegh) traced back to late Qājār times – he appreciated his country's need for cultural development and spent his entire life assisting in this cause.

In March 1947, at the age of twenty one, he made the acquaintance of Muṣaddiq during a business meeting and retained a deep respect for him and his ideas. As a result, he later published Muṣaddiq's *Memoires* (*Khāṭirāt va Ta'allumāt*, Tehran 1986), *Muṣaddiq and Legal and Political Issues* (*Muṣaddiq va Mas'āl-i Huquq va Siyāsāt*, Tehran 1979), and *Muṣaddiq's Memoires in Prison* (*Taqirāt-i Muṣaddiq dar Zindān*, Tehran 1980) that the latter dictated to Colonel Jalil Buzurgmihr. Iraj Afshar always paid homage to Muṣaddiq's followers who adhered to the National Front (*Jibhih-yi Millī*), such as Allāhyār Šālih (*Parvandi-yi Šālih*, Tehran 2004), Maḥmūd Narīmān, Ghulām-ḥusayn Šadiqī (his memorial volume, *Haftād Maqālīh*, Tehran 1992), Mahdi Adhar, 'Alī Shāyḡān, and Dāryūsh Furūhar.

Afshar received his primary and secondary education at the Zoroastrian schools of Shāhpūr and Firūz Bahrām in Tajrīsh and Tehran. He then went on to graduate in 1949 from the School of Law, University of Tehran. Assisting his father in publishing the *Āyandih* journal from the age of 19, he gained his early experiences in editing academic journals. During his collegiate years he also contributed to the Leftist periodical *Jahān-i Naw*.

Afshar's affluent upbringing meant that he never suffered financial difficulties. However, following his graduation he found work and thus no longer required monetary assistance from his family.

He began his teaching career at high schools in Tehran in 1950. He worked as a librarian at the library of the Faculty of Law, University of Tehran in 1951 where he learned librarianship. He served as the editor-in-chief of the *Mihṛ* journal (1952-1953) and with the collaboration of his colleagues, including Muḥammad Taqī Dānishpazhūh, 'Abbās Zaryāb-i Khu'i, Manūchihr Sūtūdiḥ, and Muṣṭafā Muqarrabī, he also established the *Farhang-i Irān-Zamīn* in 1952, a prestigious periodical devoted to Iranian studies.

Collaborating with the National Library of Iran in 1954, Afshar published the first volume of the *Kitāb-hā-yi Irān* (Books of Iran) which ushered in the first national bibliographical series introducing Persian books published in Iran and abroad. The series appeared annually until 1966. During this time he also served as the Editor-in-Chief of the *Sukhan* (1954-1956) and the Director of the *Kitāb-hā-yi Māh* (1955-1961).

The then director of the Bungāh-i Tarjumih va Nashr-i Kitāb (Institute for Translation and Publication of Books) was Iḥsān Yārshātir (Ehsan Yarshater), who due to his scholarly activities had to reside abroad. He therefore vested in Afshar the directorship of the newly established research and publication institute, a position he retained for seven years.

In 1956 Afshar traveled to France, where he attended some courses offered by UNESCO on modern librarianship and the theoretical principles of bibliography. This introduced him to modern achievements in librarianship and bibliography and helped in forming this particular branch of his academic activities. Over the next seven years he embarked on similar pursuits: teaching modern librarianship at the Teachers' Training College (Dānishsarā-yi 'Ālī); serving as the director and the editor-in-chief of the *Rāhnāmā-yi Kitāb* (Book Review) journal; founding the Book Club (Bāshgāh-i Kitāb) with Yārshātir, better known as the Book Association (Anjuman-i Kitāb), where modern services were made available to the readership; publishing the *Nuskhah-hā-yi Khaṭṭī* (Manuscripts) journal in collaboration with Muḥammad Taqī Dānishpazhūh; directing the National Library, where

he introduced interested scholars to academic cataloguing of manuscripts and printed books; and taking on the directorship of the Bibliographical Studies Center of the University of Tehran.

In 1959, the first volume of *Fihrist-i Maqālāt-i Fārsī* (Catalogue of Persian Articles) appeared, containing bibliographical data on 6,000 Persian articles appearing in Iranian studies journals, published both in Iran and abroad. This reference work, the seventh volume of which appeared in 2010, has, over time, attained wide recognition in Iranian studies.

From 1964 to 1971, Afshar served as the Director in charge of publications for the University of Tehran. He followed the tradition established by its founder, Parvīz Nātil Khānlārī, endeavoring to maintain the independence of these publications from any unwarranted influences exerted by self-serving academics. In 1965, he became the Director of the Central Library of the University of Tehran under the presidency of Dr. Jahānshāh Šālīh. He then devoted almost 14 years (1965-1979) to the establishment, organization, and development of the first and the richest academic central library in Iran, which served as a model for similar libraries in other Iranian universities. The *Kitābdārī* (Librarianship) journal was founded by him in 1966 when the first Master's program in that discipline was offered at the University of Tehran. As part of the course, foreign experts were invited to teach and contribute to the organisation of the Central Library. Notwithstanding disagreements with some educators of modern bibliography, who neglected the cultural elements of their society, Afshar's impact on modern scholarship, particularly on Iranian studies, is reflected in the continuity and breadth of his bibliographical activities.

Upon the invitation of the Faculty of Letters, University of Tehran, he taught historical documents and local histories of Iran for a period of ten years until his retirement as a full professor in June 1979. The courses he taught on manuscripts were attended by many Iranian librarians, bibliographers, and codicologists, who were introduced to a hitherto neglected aspect of Persian heritage.

The period from 1969 to 1979 also saw him embark on a number of other significant academic activities. He organised nine conferences on Iranian studies in different Iranian cities, attended by academics from

Iran and abroad. He also directed the *Irānshināsī* (Iranian Studies) journal published by the University of Tehran's Faculty of Letters. Furthermore, he conducted research in a number of different fields, including cataloguing manuscripts, preparing bibliographies, editing, and publishing historical documents and texts.

His retirement in June 1979 ushered in a new chapter in his academic activities that continued until his final days. He resumed the publication of the *Āyandih* journal (new series 1979-1993) founded by his father, which was more or less a continuation of the *Rāhnamā-yi Kitāb* (see above). He also assumed the directorship of the Dr. Maḥmūd Afshār Foundation (Bunyād-i Mawqūfāt-i Duktur Maḥmūd-i Afshār), in whose publications series he published academic articles and books devoted to Iranian studies.

His wide-ranging academic contributions included writing books and articles, attending conferences on Iranian studies, and authoring bibliographies and works on codicology. He supervised the compilation and publication of the Catalogue of Persian Articles (*Fihrist-i Maqālāt-i Fārsī*). He also supervised the publication of his numerous works, over 300 books and 2,000 articles on Iranian studies, codicology, bibliography, cataloguing, and Qājār studies. He conducted research on mainly contemporary, Iranian academic figures and foreign Iranologists. He produced book reviews and critiques and undertook research on Persian classical texts, historical documents, historical geography, archaeology, travelogues, and literary and mystical subjects, emphasising the literary significance of Persian sources and making available to researchers his bibliographical sources and catalogues. His expertise and erudition in the events and notable figures of Iran from the Constitutional Movement onwards have further enriched his contributions, an instance of which includes his collections of data about Sayyid Ḥasan Taqizādh, an outstanding constitutionalist.

His contributions to the field of codicology include cataloguing some of the manuscripts found in a number of collections.

He also published the facsimile edition of some manuscripts including: *al-Waqfiyyat al-Rashīdiyya* (1971), *Bayāḍ* (1974), *al-Mukhtārāt min al-Rasā'il* (1976), *Lawā'ih wa Lawāmi'* (1981), *Tadhkira-yi Anjuman-i Nāsirī* (1984), *Mirāt al-Safar* (1985), *Mujmal al-Tawārīkh*

wa 'l-Qaṣaṣ (2000), and *Būstān-i Sa'dī* (2001). *Majmū'ih-yi Kamīnih* (1975) includes certain of his articles devoted to bibliography and codicology. *Bayād-i Safar* (1975) contains selections from his notes on codicology, which he wrote during his travels. He published or collaborated in the publication of 53 catalogues of manuscripts (Afshār et al, pp. 42-45) and included many manuscripts in his articles (at least 105 articles, *ibid*, pp. 41-42, 45-69). Besides cataloguing many academic and private collections in Iran, he also catalogued a large number of manuscripts at numerous collections abroad, including those of the Royal Asiatic Society of Great Britain and Ireland, London (1967), the University of Edinburgh (1967), the University of Stockholm (1967), the University of Utrecht (1967), the Royal Library, Copenhagen (1967), the British Museum (1965), the University of Michigan (1967), Le Bibliothèque Nationale de France (1965, 1967), Harvard University (1967), the Iranian Consulate in Istanbul (1975), collections in Athens and Tunisia (1978), and the Institute of Oriental Studies, Leningrad (1965).

Afshar was also consulted by numerous Iranian and non-Iranian institutes and researchers working in the fields of Iranian studies, bibliography, and codicology, serving as a nexus between different academics.

One of the few scholars who traversed Iran as well as major parts of the Persian speaking world beyond, Afshar took photographs, made notes, and recorded data from locals and scholars. Some of this has appeared in different periodicals, and serves as a testimony of his vast erudition and academic precision. This academic precision increased with time and with the growth of his knowledge and experience.

He was a member of the Center for the Great Islamic Encyclopaedia (Markaz-i Dā'irat al-Ma'ārif-i Buzurg-i Islāmī) and in addition to participating in the research activities of the Center, particularly those relating to Iranian studies; he also supervised its library collection. As a gift to the Center, he presented his own personal, rich library collection, which included 30,000 manuscripts and printed materials, some of which had been bequeathed to him by distinguished figures such as Sayyid Ḥasan Taqizādh and Allāhyār Šālīh. The photographs taken by him, including those of notable characters, historical monuments, and

scenery, exceed 10,000 in number. The collection of his correspondences with notable Iranian and international figures exceeds 10,000 and is of historical and literary significance. He also contributed numerous articles on local histories to the *Dānishnāmih-yi Jahān-i Islām* (*Encyclopaedia of the World of Islam*).

He contributed countless articles, book chapters, and reviews to a wide variety of periodicals, books, festschrifts, and memorial volumes over a 65 year period.

Afshar died of leukemia on 9 March 2011 in Tehran. He was laid to rest in his family chamber (no. 300) in the Bihisht-i Zahra' Cemetery.

CHRONOLOGY OF AFSHAR'S SELECTED ACADEMIC
CONTRIBUTIONS TO BIBLIOGRAPHY, CODICOLOGY,
CATALOGUING, AND CRITICAL EDITIONS OF MANUSCRIPTS

1945: Prepared the yearly index of articles for the *Āyandih* Journal.

1951-1960: Librarian at the Library of the School of Law, University of Tehran (invited and supervised by Muhsin Šabā and Muḥammad Taqī Dānishpazhūh).

1951: Member of the Society of Iranian Studies (presided over by Ibrāhīm Pūrdāvūd, executive director: Muḥammad Mu'in); book review on Muḥammad Šadr Ḥāshimī's *Tārīkh-i Jarā'id va Majallāt-i Irān* (History of Newspapers and Journals in Iran, 4 vols.); published *Kitāb-hā-yi Nathr-i Fārsī-yi Mu'āšir* (Contemporary Persian Books in Prose).

1952: Edited and published *Ḥālāt va Sukhanān-i Abū Sa'id Abū al-Khayr* (The Mystical States and Words of Abū Sa'id Abū al-Khayr), *Samariyya dar Mazārāt-i Samarqand va Sā'ir-i Ma'lūmāt-i Rāji' bih Ān Shahr* (The Book of Samar on the Tombs of Samarkand and Further Details Pertaining to That City), and *Samariyya: Mazārāt-i Samarqand* (2nd ed.); founded the *Farhang-i Irān-Zamīn* (Culture of the Land of Iran, in collaboration with Muḥammad Taqī Dānishpazhūh, Manūchihr Sutūdiḥ, Muṣṭafā Muqarrabī, and 'Abbās Zaryāb Khu'i); Director-in-Chief of the *Mihr* (Love) journal, nos. 8-9 (licence-holder: Majīd Muvaqqar)

1952-1979: Director of the National Team of the Bibliography of Iran.

1953-2005: Director of the *Farhang-i Irān-Zamīn* (Culture of Iran).

1953: Edited and published *Maddat al-Hayāh* (Substance of Life on cuisine).

1953-1975: Edited and published Muḥammad Qazwīnī's *Yaddāsh-t-hā* (Notes).

1954-1956: Editor-in-Chief of the *Sukhan* journal, vols. 5-7 (licence-holder: Parviz Nātil Khānlārī).

1954-1966: Compiled *Kitābshināsī-yi Irān/Kitāb-hā-yi Irān* (Bibliography of Iran/Books of Iran).

1954: Edited and published *Firdaws al-Murshidiyya fī Asrār al-Ṣamadiyya* (Paradise of the Spiritual Guides on the Secrets of the Needless [God]); wrote *Nakhustīn Safar-nāmchih bih Kirmān va Sīstān* (The First Book of Travels to Kerman and Sistan).

1955-1968: *Kitābshināsī-yi Irān/Kitāb-hā-yi Irān*.

1955: Wrote reviews on *Farhang-i Lāristānī* ('Glossary of the Larestani Dialect'); Founding Member of the Iranian Society of Philosophy and Humanities, affiliated with UNESCO.

1955-1960: Director of the *Kitāb-hā-yi Māh* (Books of the Month) journal of the Association of the editors.

1955-1977: Contributed articles to *Dā'irat al-Ma'ārif-i Fārsī* (The Persian Encyclopedia).

1955-1979: Member of the Iranian Society of Philosophy and Humanities, affiliated with UNESCO.

1955-2005: Director and supervisor of the *Farhang-i Irān-Zamīn*.

1956: Wrote reviews on *Farhang-i Kirmānī* (Glossary of the Dialect of Kerman) wrote an introduction to the *Dīwān* (Collection of Poetry) of Waḥshī-yi Bāfqī; edited and published *Āghāz va Anjām* (The Beginning and the End, a theological discussion by Naṣīr al-Dīn al-Ṭūsī on resurrection), *Ālamārā-yi 'Abbāsī* (Embellisher of the World dedicated to Shāh 'Abbās), *'Arq-i Sipāh-i Uzūn Ḥasan* (March of Army before Uzūn Ḥasan); 2nd edition of *Firdaws al-Murshidiyya fī Asrār al-Ṣamadiyya* with the supplement *Anwār al-Murshidiyya wa Asrār al-Ṣamadiyya, Tārikh-i Kāshān: Mir'āt al-Qāsān* (History of Kashan: Mirror of Kashan).

1956-1963: Alternate Director-General and Supervisor of

Publications at Bungāh-i Tarjumih va Nashr-i Kitāb (Institute for Publication and Translation) in the absence of Ihsan Yarshater.

1956-1979: Published news concerning the period of his office in the *Nashriyyih-yi Akhbār-i Dānishgāh-i Tih-rān*.

1956-1957: Attended the librarianship training course held by UNESCO in Europe.

1957-1958: Co-Founder of the Kulūp-i Kitāb (Book Club), later known as Anjuman-i Kitāb (Book Society).

1957: Published the 2nd edition of the first volume of *Kitābshināsī-yi Irān*; contributed articles to the *Yaghmā* and the *Farhang-i Irān-Zamīn*.

1958: Member of the Council of the Library of the Foreign Ministry; published *Tārīkh-i Kāshān: Mir'āt al-Qāsān* ('History of Kashan: Mirror of Kashan'), *Bayān al-Šinā'āt* ('Exposition of the Arts'), *Kitābshināsī-yi Fihrist-hā-yi Nuskhah-hā-yi Khaṭṭī-yi Fārsī dar Dunyā* ('Bibliography of the Catalogues of Persian Manuscripts in the World'); *Yaddāsh-t-hā-yi Qazwīnī* (vol. 1, 2nd ed.).

1958-1969: Taught library studies and codicology at the Teachers' Training College.

1958-1961: Supervised the publications of the National Team of the Bibliography of Iran.

1958-1979: Director of the *Rāhnamā-yi Kitāb* ('Book Guide', licence-holder: Ihsan Yarshater), wherein he published photographs with historical significance; President of the Book Society and the Supervisor of its publications; Supervisor of the Persian and Iranian Bibliography series.

1959: Member of the Kumīti-h-yi Tashkīl-i Bāygānī-yi Kull-i Kishvar (Committee for the Organization of Nationwide Archives) held by UNESCO; contributed articles to the *Lughat-nāmih-yi Dihkhudā* (The Dihkhudā Dictionary); edited and published *Tārīkh-i Yazd* (History of Yazd) and *Yaddāsh-t-hā-yi Qazwīnī* (vol. 4).

1959-1960: Member of the Kumīti-h-yi Taqwīm-i Asnād-i Millī (Committee for Appraisal of National Documents); contributed articles to the *Rāhnamā-yi Kitāb*, the *Nashriyyih-yi Nuskhah-hā-yi Khaṭṭī*, the *Nashriyyih-yi Dānishkadīh-yi Adabiyyāt-i Dānishgāh-i Tih-rān*, the *Yaghmā*, and the *Farhang-i Irān-Zamīn*; published *Tārīkh-i Kabīr* (The

Great History), *Risālih-yi Mawqūfāt-i Yazd* (Treatise on the Charitable Organizations of Yazd), *Mīrzā Taqī Khān Amīr Kabīr*; co-founded the *Nashriyyih-yi Nuskhih-hā-yi Khattī* (Journal of the Manuscripts) in collaboration with Muḥammad Taqī Dānishpazhūh.

1960-1979: Director of the *Nashriyyih-yi Nuskhih-hā-yi Khattī*, affiliated with the Central Library and the Center for Archives, University of Tehran (8 vols.).

1961: Transferred from the Faculty of Law, University of Tehran, to the Teachers' Training College; published the first volume of the *Fihrist-i Maqālāt-i Fārsī* (Catalogue of Persian Articles); edited and published *Masālik wa Mamālik* (Paths and Territories), *Jāmi'-i Mufīdī* (vol. 1 of Mufid's Compendium, on the geography and history of Yazd by Muḥammad Mufid ibn Ḥabīb Allah Bāfqī Yazdī, written in the late eleventh/seventeenth century), *Risālih-yi Uṣūl-i Khuṭūṭ-i Sitta* (Treatise on the Principles of the Six [Calligraphic] Hands), *Yāddāsht-hā-yi Qazwīnī* (vol. 5); published a treatise entitled *Bih Yād-i Farzand-i Faḍīlat-Shī'ār-i Rashīd-i Irān Sayyid Maḥmūd Narīmān* (Memorial Volume for the Virtuous and Rightly-Guided Son of Iran Sayyid Maḥmūd Narīmān); contributed articles to the *Nashriyyih-yi Rāhnāmā-yi Kitāb*, the *Yaghmā*, the *Nashriyyih-yi Nuskhih-hā-yi Khattī*, the *Nashriyyih-yi Dānishkadīh-yi Adabiyyāt-i Dānishgāh-i Tih-rān*, and the *Farhang-i Irān-Zamīn*.

1961-1962: Director of the Library of the Teachers' Training College

1962: Chief-Director of the *Kitābkhānih-yi Millī* (National Library; seven months) where his activities included: founding the Department of Iranian Studies, reference rooms, and the Bibliography of Iran, as well as cataloguing the Library's manuscripts in collaboration with 'Abd Allah Anvār; taught at the Teachers' Training College; member of the Council of the Institute of Studies on the Literature and Languages of Iran, affiliated with the Education Ministry; wrote introductions to *Farhang-i Lughāt-i 'Āmīyānih* (Dictionary of Colloquialisms), *Muqaddamih bar Tārīkh-i Mughul: Tārīkh-i Mufaṣṣal-i Irān az Istīlā-yi Mughul tā l'lān-i Mashrūṭiyyat* (Introduction to the History of the Mongols: Detailed History of Iran from the Mongol Conquest to the Declaration of the Constitution); edited and published *Jāmi' al-*

Khayrāt: Waqfnāmih-yi Sayyid Rukn al-Dīn Ḥusaynī Yazdī (Compendium of the Blessings: The Endowment Deed of Sayyid Rukn al-Dīn Ḥusaynī Yazdī), *Pandnāma* (Book of Wise Counsels), *Yādīgār-i Zindigī* (Memoires), 2nd edition of *Ḥālāt va Sukhanān-i Abū Sa'īd Abū al-Khayr* (The Mystical States and Words of Abū Sa'īd Abū al-Khayr), *Yāddāsht-hā-yi Qazwīnī* (vol. 6), *Sargudhasht-i Sayf al-Dīn Bākharzī* (Biography of Sayf al-Dīn Bākharzī).

1962-1979: Member of the Council of the Central Library, University of Tehran.

1963: Wrote the accounts of his travels under the title *Qum bih Bam* (From Qum to Bam); taught at the University of Tehran; catalogued the Persian printed books at Harvard (seven months); published *Fihristnāmih-yi Kitābshināsī-hā-yi Irān* (Catalogue of Bibliographies of Iran), *Majmū'ih-yi Asnād va Madārik-i Chāpnashudih dar bārih-yi Sayyid Jamāl al-Dīn [Asadābādī]* (Collection of Unpublished Documents on Sayyid Jamāl al-Dīn); wrote an introduction to *Safarnāmih-yi Ḥājji Pīrzādih* (Travelogue of Ḥājji Pīrzādih); contributed articles to the *Nashriyyih-yi Dānishkadīh-yi Adabiyyāt-i Dānishgāh-i Tihārān*, *Majmū'ih-yi Maqālāt-i Taḥqīqī-yi Khāvarshināsī Ihdā' bith Āqā-yi Prufsur Henri Massé* (Henri Massé Festschrift), *Irānshahr* (Land of Iran).

1963-1964: Director of the Center for Bibliographical Studies (Markaz-i Taḥqīqāt-i Kitābshināsī).

1963-1971: Director of the *Irānshināsī* (Iranian Studies) journal, published by the *Nashriyyih-yi Dānishkadīh-yi Adabiyyāt va 'Ulūm-i Insānī*, the University of Tehran.

1964: Edited and published *Iskandarnāma* (The Book of Alexander), *Tārīkh-i Mukhtaṣar-i Isfahān* (Brief History of Isfahan), *Samariyya: dar Bayān-i Awṣāf-i Ṭabī'ī va Mazārāt-i Samarqand* (Samariyya: on the Natural Depiction of the Tombs of Samarkand, 3rd ed.), *Kitābkhānih-hā-yi Irān* (Libraries of Iran); wrote an introduction to *Nimūnih-yi Naẓm va Nathr-i Fārsī az Āthār-i Asātid-i Mutaqaddim* (Chrestomathy of Persian Poetry and Prose Selected from the Works of Earlier Masters); Coordinator of a program on Library Studies offered by the Council for the Preparation of Textbooks for the Newly Literate affiliated with UNESCO; launched the project of pre-publication cata-

loguing for the Publications of the University of Tehran; wrote a travelogue entitled *Shab-hā-yi Zindān-i Sikandar* (Nights in Alexander's Prison¹).

1964-1971: Director of Publications and Cultural Relations (later Bureau of Publications and Inter-Library Relations), University of Tehran.

1964-1979: Member of the Books Selection Board affiliated with the Higher Education Ministry, Education Ministry, and Ministry of Culture and Arts.

1964-1980: Director of Publications at the Central Library and the Centre for Archives, University of Tehran; Supervisor of catalogues and bibliographies for the publications of the Central Library and the Centre for Archives, University of Tehran.

1965: Contributed articles to *Tajlīl-i Jāmī* (Jāmī Commemorative Volume), *Haftād Sāligi-yi Farrukh* (Commemorative Volume Published on the Occasion of [Maḥmūd] Farrukh's Seventieth Birth Anniversary), 1st volume of *Savād u Bayāḍ* (Rough Notes and Fair Copy; a collection of Afshar's articles, vol. 2 appeared in 1970); member of the Executive Board of the Center for Studying and Introducing the Civilization and Culture of Iran, affiliated with the Ministry of Culture and Art; Founding Member of the Iranian Society of the History of Sciences and Medicine (Anjuman-i Irānī-yi Tārīkh-i 'Ulūm va Tibb); wrote a survey of the documents on Farrukh Khān's *Makhzan al-Waqā'i*: *Sharḥ-i Ma'mūriyyat va Musāfirat-i Farrukh Khān Amīn al-Dawla* (Treasure of the Events: An Account of the Mission and Travel of Farrukh Khān); reviewed Johhan Schlimmer's *Terminologie médico-pharmaceutique et anthropologique française-persane*; edited and published *Dhakhira-yi Khwārazmshāhī* (The Khwārazmshāhid Treasure), *Tadhkira-yi Jalālī* (Biographical Accounts by Jalālī [devoted to the history of Yazd]), 2nd edition of *Tārīkh-i Yazd* (History of Yazd), *Safarnāmiḥ-yi Sistān va Khurāsān* (Travels in Sistan and Khurasan), *Qawā'id-i ḍarb wa Qismat wa Ṭarīq-i Taqsim-i Āb-i Harāt* (The Rules and Methods of Distribution of Water in Herat), *Kārnāmiḥ-yi Awqāf* (A Historical Survey of Endowments and Charitable Organizations [in Iran]), *Siyr-i Kitāb dar Irān* (A Historical Survey of Book Production in Iran), *Kitābkhāniḥ-hā-yi Irān va Muqaddamiḥ-i dar bāriḥ-yi*

Kitābkhānih-hā-yi Qadīm (Libraries in Iran and an Introduction to Old Libraries); supervised the publication of *Uṣūl-i Sādiḥ-yi Kitābdārī* (Simplified Principles of Librarianship); published *Tārīkh-i Kāshān: Mir'āt al-Qāsān* (History of Kashan: Mirror of Kashan) with Ilāhyār Ṣāliḥ's annotations.

1965-1973: Taught courses on the socio-historical institutions in Iran at the Faculty of Social Sciences, University of Tehran

1965-1979: Director of the Central Library and the Center for Archives, University of Tehran (until February 1979); member of the Manuscripts Appraisal Boards of the Libraries of the National Consultative Assembly and the Senate; member of the Board of Trustees of Bunyād-i Farhang-i Iran (Iran Cultural Foundation).

1965-2010: Member of the Manuscripts Appraisals Board at the University of Tehran.

1966: Wrote an introduction to *Fihrist-i Kitābkhānih-yi Majlis-i Shūrā-yi Millī* (Catalogue of the Library of the National Consultative Assembly), a note on the author of *Ḥaqā'iq al-Akhhbār-i Nāṣirī* (True Historical Accounts of the Reign of the Qājār Nāṣir al-Dīn Shāh), and the accounts of his travels entitled *Bist Shahr u Hazār Farsang* (Twenty Cities and One Thousand Leagues); founded the *Kitābdārī* (Librarianship) journal, affiliated with the Central Library and the Center for Archives, University of Tehran; published *Awrad al-Aḥbāb wa Fuṣūs al-Ādāb* (Prayers of the Friends and the Gems of the Decorum), *Tārīkh-i Jadīd-i Yazd* (New History of Yazd), *'Arā'is al-Jawāhir wa Nafā'is al-Aṭāyib* (Brides of the Jewelry and the Best of the Precious Things), *Ramz al-Rayāḥīn* (Secret of the Aromatic Plants), Catalogue of the Persian Printed Books at the Widener Library (Harvard), *Rūznāmih-yi Khāṭirāt-i I'timād al-Saltāna* (Memoires of I'timād al-Saltāna), *Yaddāsht-hā-yi Qazwīnī* (Qazwīnī's Notes).

1966-1969: Supervised the published *Fihrist-i Nuskhih-hā-yi Khattī-yi Kitābkhānih-yi Majlis-i Shūrā-yi Millī* (Catalogue of the Manuscripts Available at the Library of the National Consultative Assembly).

1966-1979: Director of the *Kitābdārī* journal published by the Central Library and the Center for Archives, University of Tehran (7 vols.); supervised the *Khāṭirāt va Safarnāmih-hā-yi Irān* (Memoires and

travelogues of Iran) published by Amīr Kabīr Publications.

1967: Wrote and published his travelogue entitled *Gashtī dar Khāk-i Yazd* (A Tour in the Land of Yazd); wrote a review on *Kitābshināsi-yi Āmūzish va Parvarish* (Bibliography of Education); edited and published *Khābguzārī* (Interpretation of Dreams), *Farrukhnāma* (The Auspicious Book [an encyclopedia of sciences, arts, and beliefs by Jamālī Yazdī]), *Anīs al-‘Ashiqīn* (Companion of the Lovers), *Sawānih fi ‘l-Ishq* (Auspices in Love), *Sharā‘it-i Murīdī* (Etiquette of Discipleship), *Faṣl dar ‘Irfān* (Treatise on Mysticism), 3rd edition of the first volume of *Yaddāsht-hā-yi Qazwīnī*; published *Kitābshināsi-yi Dah Sālīh* (A Decade's Bibliography).

1968: Wrote reviews on the three travelogues of *Herat*, *Marv*, and *Mashhad*; contributed *Chand Kalamih* (Few Words) to the *Kitābdārī*, published by the Central Library and the Center for Archives, University of Tehran; wrote reviews on *Kitābshināsi-yi Nivishtih-hā-yi Fārsī barā-yi Kūdākān va Nawjavānān* (Bibliography of the Persian Writings for Children and Young Adults); wrote *Tawdīh* (Notes) on *Majmū‘ih-yi Asnād va Madārik-i Farrukh Khān Amīn al-Dawla* (Collection of the Documents on Farrukh Khān Amīn al-Dawla); published *Kitāb-hā-yi Guzīdih* (Selected Books), *Chār Takht* (The Four Thrones), *Safarnāmi-h-yi Kulunil Luwāt* (Travelogue of Colonel Loitte), *Safarnāmi-h-yi Nizām al-Mulk az Tihrān bih Shīrāz* (Travelogue of Nizām al-Mulk from Tehran to Shiraz), *Kamāndārī* (Archery), *Gulzār-i Sa‘adat* (Garden of Happiness), 2nd volume of *Yaddāsht-hā-yi Qazwīnī*, *Kitābshināsi-yi Firdawsī* (Bibliography of Firdawsī), *Yādnāmi-h-yi Mīnurskī* (Minorsky Memorial Volume), 2nd edition of *Masālik wa Mamālik*.

1968-1975: Published *Yadigār-hā-yi Yazd* (Monuments of Yazd).

1969: Edited and published the following: *Dīwān-i Kuhnīh-yi Hāfiz* (An Early Manuscript of the *Dīwān* of Hāfiz), an early Persian translation of the Holy Qur‘an in the *Yaghmā* journal, another edition of the same early Persian translation of the Holy Qur‘an in the *Rāhnāmā-yi Kitāb* journal, the *Maqāmāt* (Spiritual Stations) of Sadīd al-Dīn A‘war, *Hidāyat al-Taṣḍīq ilā Hikāyat al-Ḥarīq* (True Guidance towards the Account of the Conflagration), *Fihrist-i Maqālāt-i Huqūqī* (Catalogue of Articles on Law), *Istarābād-nāma* (The Book of

Istarābād), Rashīd al-Dīn Faḍl Allah, 2nd edition of the first two volumes of the *Catalogue of Persian Articles on Iranian Studies*; contributed articles to *Yādnāmih-yi Irānī-yi Mīnurskī* (Minorsky's Memorial Volume published in Iran); wrote some calligraphers' biographical accounts published in *Nasta'liq-nivīsān* (Nasta'liq Calligraphers); wrote introductions to and reviews of *Istarābādnāma*, *Fihrist-i Mikrufilm-hā-yi Kitābkhānih-yi Markazī-yi Dānishgāh-i Tehran* (Catalogue of the Microfilms Available at the Central Library of the University of Tehran), *Fihrist-i Nuskhah-hā-yi Khattī-yi Fārsī* (Catalogue of Persian Manuscripts); Director of the National Center for Books, affiliated with UNESCO; supervised the publication of the collected works of Rashīd al-Dīn Faḍl Allah Hamadānī; wrote a travelogue entitled *Haft Band-i Safar-i Mashhad* (The Seven Stages of Travel to Mashhad); appointed associate professor at the Faculty of Letters and Humanities, University of Tehran.

1969-1971: Member of the editorial board of the Journal of the Faculty of Letters and Humanities, University of Tehran.

1969-1979: Executive Director of the Conference on Iranian Studies; Associate Professor and later Full Professor of History, teaching historical documents and local histories at the Faculty of Letters and Humanities, University of Tehran; taught codicology courses on Librarianship Programs, Faculty of Educational Sciences, University of Tehran.

1970: Wrote annotations on *Bayān-i Wāqī'* (The True Account), a biographical account of Nadir Shah, catalogue of German books on Iran, introduction to the ten year hand-list of the articles published in the *Rāhnāmā-yi Kitāb* (1958-1967), contributing articles and chapters to *Maqālāt-i Taqīzādih* (Taqīzādih's Articles), *Firdawsī va Shāhnāmih-yi Ū* (Firdawsī and His Shāhnāmih), *Yādnāmih-yi Firdawsī* (Homage to Firdawsī), *Yādnāmih-yi Taqīzādih* (Taqīzādih Memorial Volume); edited and published *Iṣṭilāḥāt-i Šafīyya* (A Sufi Terminology), *Awqāf-i Rashīdī dar Yazd* (The Charitable Organizations Founded by Rashīd al-Dīn Faḍl Allah in Yazd), an early Turkish translation of *Tuḥfat al-'Ushshāq* (The Lovers' Souvenir), *Jildsāzī* (A Monograph on Book Binding), *Qiṣṣihī az Iskandar* (A Tale of Alexander), *Sargudhasht-i Muḥammad Ḥasan-i Malik al-Ḥukamā* (The Life Account of

Muḥammad Ḥasan-i Malik al-Ḥukamā), *Rāhnamā-yi Taḥqīqāt-i Īrānī* (A Guide to Iranian Studies), 3rd edition of *Ḥālāt wa Sukhanān-i Abū Sa'īd Abū al-Khayr* (The Spiritual States and Words of Abū Sa'īd Abū al-Khayr), *Savād u Bayāḍ* (Rough Notes and Fair Copy, 2nd vol.).

1970-1979: Published *Maqālāt-i Taqīzādih* (Taqīzādih's Articles).

1971: Wrote contributing articles to *Majmū'ih-yi Nāmih-hā-yi Mīnuvī* (Collection of Mīnuvī's Letters), *Majmū'ih-yi Khitābih-hā-yi Taḥqīqī dar bārih-yi Rashīd al-Dīn Faḍl Allah* (Collection of the Academic Lectures on Rashīd al-Dīn Faḍl Allah); wrote a travelogue entitled *Yārān dar Shīrāz* (Friends in Shiraz); annotated *Miṣbāḥ al-Arwāḥ* (Light of the Spirits) of Muḥammad Bardsīrī Kirmānī; wrote an introduction to *Fihrist-i Nuskhah-hā-yi Khaṭṭī-yi Kitābkhānih-yi Vazīrī-yi Yazd* (Catalogue of the Manuscripts at the Library of Vazīrī, Yazd); wrote reviews on the Exhibition of the Manuscripts and Documents Available at the Central Library and the Center for Archives, University of Tehran, Collection of the Documents of Farrukh Khān Amīn al-Dawla, Proceedings of the First Conference on Iranian Studies; taught at Sapporo University, Japan; edited and published *Nawādir al-Tabādur li-Tuḥfat al-Bahādur* (Astounding Rarities for Presenting to Bahādur; in collaboration with Muḥammad Taqī Dānish-pazhūh); *Anīs al-Nās* (People's Companion), an early Persian translation of the Holy Qur'an in the *Kamīnih* (The Humble) Collection (3rd edition), *Dāfi' al-Ghurūr: Safarnāmih-yi 'Abd al-'Alī Adīb al-Mulk Muqaddam* (The Repellent of Arrogance: The Travelogue of 'Abd al-'Alī Adīb al-Mulk Muqaddam); *Waqfnāma-yi Rab'-i Rashīdī: al-Waqfiyyat al-Rashīdiyya* (The Endowment Deed of the City Complex Endowed by Rashīd al-Dīn Faḍl Allah Hamadānī, facsimile edition of an old ms. with Muḥtabā Mīnuvī, Society for National Monuments, Tehran), *Majmū'ih-yi Khitābih-hā-yi Taḥqīqī dar bārih-yi Rashīd al-Dīn Faḍl Allah Hamadānī* (Proceedings of the Conference on Rashīd al-Dīn Faḍl Allah Hamadānī), *Nāmih-yi Mīnuvī* (Mīnuvī Festschrift), *Ālamārā-yi 'Abbāsī* (A History of the Reign of the Ṣafavid Shāh 'Abbās I entitled The Adornment of the World Presented to Shah 'Abbās; 2nd edition), *Jāmi' al-Khayrāt: Waqfnāma-yi Rukn al-Dīn Ḥusayn Yazdī* (Compendium of the Blessings: The Endowment Deed of Rukn al-Dīn Ḥusayn Yazdī; 2nd edition), *Maqāmāt* (Spiritual Stations)

of Sadīd al-Dīn A'war (2nd edition), *Rūznāmih-yi Khātirāt-i I'timād al-Saltāna* (Memoires of I'timād al-Saltāna; 2nd edition), *Dīwān-i Kuhnih-yi Hāfiz* (An Early Manuscript of the Dīwān of Hāfiz; 2nd ed.).

1971-2010: Undertook, the appraisal of Manuscripts at the Central Library of the University of Tehran.

1972: Edited and published *Āthār-i Darwīsh Muḥammad Ṭabasī*, *Dīwān-i 'Ubayd-i Zākānī*, *Khātirāt va Asnād-i Ṣahīr al-Dawla* (Memoirs and Documents of Ṣahīr al-Dawla), contributing articles to the *Yaghma*, the *Rāhnāmā-yi Kitāb*, the *Hunar u Mardum*, the *Nashriyyih-yi Dānishkadīh-yi Adabiyyāt-i Dānishgāh-i Tehran*, the *Tahqīqāt-i Rūznāmih-nigārī*, the *Hūkht*, the *Irān-Zamīn*; wrote annotations on *Fihrist-i Nuskhah-hā-yi Khattī-yi Chahār Kitābkhānih-yi Mashhad* (Catalogue of the Manuscripts Available with Four Libraries in Mashhad, *Īn Majmū'ih Chīst?* (What is this collection?), reviews on *Majmū'ih-yi Manābi' va Asnād-i Tārīkhī-yi Dawrih-yi Qājār* (Collection of the Historical Sources and Documents from the Qājār Period).

1972-1976: Member of the Council of the Public Libraries of Tehran; member of Iran's Librarians' Association.

1972-1979: Member of the Book Award of the Year.

1972-1998: Supervised the edition and publication of *Majmū'ih-yi Manābi' va Asnād-i Tārīkhī-yi Dawrih-yi Qājār* (Collection of the Historical Sources and Documents from the Qājār Period), published by Jibī Publications, affiliated with Franklin Publications, later 'Ilmī va Farhangī Publications.

1973: Wrote an introduction to and annotations on *Asnād-i Marbūṭ bih Ravābiṭ-i Tārīkhī-yi Irān va Jumhūrī-yi Vinīz* (The Documents on the Historical Relations between Iran and the Republic of Venice), an introduction to the *Kitābshināsī-yi Mawḍū'ī-yi Irān* (Bibliography of Iran by Subject; 1964-1969), annotations on *Masīr-i Ṭalībī: Safarnāmih-yi Mīrzā Abū Ṭalīb Khān* (Ṭalībī's Course of Travels: The Travelogue of Mīrzā Abū Ṭalīb Khān); edited and published *Ṣaydana* (Abū Rayḥān al-Bīrūnī's Pharmaceutical Oeuvre), *Tashkhiṣ va Tarqīm-i Alqāb dar Ṣāl-i 1279* (Distinction and Recording of Titles in the Year 1862), *Tartīb-i Alqāb* (Hierarchy of Titles), *Safarnāmih-yi Tilgirāfchī* (Travelogue of the Telegraph Clerk),

Rūznāmih-yi Akhbār-i Mashrūṭiyyat va Inqilāb-i Īrān (Accounts of the Events of the Constitutional Period and Iran's [Constitutional] Revolution).

1974-2001: Published *Fihrist-i Nuskhah-hā-yi Khaṭṭī-yi Kitābkhānih-yi Milli-yi Malik* (Catalogue of the Manuscripts Available at the Malik National Library).

1974: Wrote an introduction to *Fihrist-i Mikrofīlm-hā-yi Kitābkhānih-yi Markazī va Markaz-i Asnād-i Dānishgāh-i Tih-rān* (Catalogue of the Microfilms of the Central Library and the Center for the Archives, University of Tehran); published early textbooks, *Waṣāyā* (Counsels) addressed to Shams al-Dīn Ḥusaynī, *Jāmi'-i Ja'farī* (Muḥammad Ja'far Nā'inī's History of Yazd under Nādir Shah, the Zand, and the Qājār Faṭḥ'Alī Shah), *Nāmih-hā-yi Qazwīnī bih Taqīzādih* (Qazwīnī's Letters to Taqīzādih), *Bayāḍ* (lit. 'Fair Copy', a history of Fars of the Vizier Taj al-Dīn Aḥmad, facsimile edition of a ms. Dated 872/1467 with Murtaḍā Tiymūrī, University of Isfahan), *Qawā'id-i Fihrist-nivīsī-yi Anglu-Amirīkan* (Anglo-American Rules of Cataloguing); contributed articles to *Yādnāmih-yi Bīrūnī* (Bīrūnī Memorial Volume), *Āmirināmih* (a collection of articles devoted to the life and works of Abū al-Ḥasan 'Āmirī, the fourth/tenth century philosopher), *Maqālāt-i Furūghī* (Furūghī's Articles); wrote annotations on *Fihrist-i Nuskhah-hā-yi Khaṭṭī-yi Kitābkhānih-hā-yi Rasht va Hamadān* (Catalogue of the Manuscripts Available at the Libraries of Rasht and Hamadān), *Kitābshināsī-yi Shi'r-i Naw dar Īrān* (Bibliography of Modern Poetry in Iran).

1974-1979: Director and member of the executive board of the History Society, affiliated with the Academy of Language and Literature (Iran).

1974-2010: Member of the Board of Trustees of the Library Bequeathed by Muṭtabā Mīnuvī to the Bunyād-i Shāhnāma (Institute for Shāhnāma Studies).

1975: Wrote an introduction to the Catalogue of Persian Newspapers preserved in the Collection of the Central Library and the Center for Archives, University of Tehran, an acknowledgement to and reviews on the Collection of the Documents on Farrukh Khān Amīn al-Dawla, Annotations on the Proceedings to the First Conference on

Iranian Studies, *Kārnāmih-yi Bīst Sāl Farhang-i Īrān-Zamīn* (hand-list of the works published in the Farhang-i Īrān-Zamīn), *Majmū'ih-yi Kamīnih* (A Collection of Articles on Bibliography and Codicology), *Jashn-nāmih-yi Parvīn-i Gunābādī* (Parvīn-i Gunābādī Festschrift), *Sukhanānī dar bārih-yi Furūghī* (Notes on Furūghī); edited and published *al-Taḥbīr fī 'Ilm al-Ta'bīr* (Elegant Composition on the Interpretation of Dreams), *Waqfiyya-yi Kajajī* (Kajajī's Endowment Title Deed), *Targhib al-Muta'allimīn* (Encouragement of the Learners), *'Umdat al-Kuttāb* and *'Uddat Dhawī 'l-Albāb* (The Main Reference Book for the Scribes and the Support for the Wise), *Ṣūrat-i Intizāmāt-i Bāgh va Khalvat-i Nāširī dar Sāl-i 1298 Qamarī* (Account of the Organization of the Nāširid Garden and Retreat in the Lunar Year 1298 [1880]), *Nāmih-hā-yi Edward Browne bih Taqīzādih* (Edward Browne's Letters to Taqīzādih), Abū Naṣr Fārābī; edited the accounts of some of his travels abroad, further notes, and *Bayāḍ-i Safar* (accounts of his journeys made for Iranian Studies, bibliography, and codicology).

1976-2010: Member of the Board of Trustees supervising the publication of the works of Sayyid Muḥammad 'Alī Jamālzādih vested in the University of Tehran.

1976: Wrote his travelogue entitled *Aṭlāl-i Parīs* (lit. 'Ruins', fig. Monuments of Paris); contributed articles to *Humā'ī-nāmih* (Humā'ī Festschrift), *Yādnāmih-yi Nāšir-i Khusraw* (Nāšir-i Khusraw's Memorial Volume), *Yādnāmih-yi Daqīqī-yi Ṭūsī* (Daqīqī-yi Ṭūsī's Memorial Volume), *Armaghānī barā-yi Zarrīnkūb* (Zarrīnkūb Festschrift), the 20 volume edition of the *Farhang-i Īrān-Zamīn* in 10 volumes by the Nūshīravānī Charitable Organization, 2nd vol.; edited and published *Raṣadkhānīh-yi Marāgha* (The Observatory of Marāgha), *Shāhnāma az Khaṭṭī tā Chāpī* (Shāhnāma from manuscript copies to printed editions), *al-Mukhtārāt min al-Rasā'il* (An Epistolary Selection including official letters, edicts, and verdicts from the fifth/eleventh to the seventh/thirteenth centuries, a facsimile edition of a unique manuscript available with the Vazīrī Library in Yazd, published by National Monuments Society, Tehran), *Yādigārnāmih-yi Ibrāhīm Pūrdāvūd* (Pūrdāvūd Festschrift), *Majallih-yi Kāvīh*; 2nd ed. of *Kitābshināsī-yi Firdawsī* (A Bibliography of F.), *Mīrza Taqī Khān-i Amīr Kabīr* (2nd edition); *Fihrist-i Maqālāt-i Fārsī dar Zamīnih-yi*

Tahqīqāt-i Irānī (Catalogue of Persian Articles on Iranian Studies, 3rd vol.), an introduction to the catalogue of the manuscripts bequeathed by Mishkāt to the Central Library and the Center for Archives, University of Tehran, a zoological bibliography, a bibliography of book review and critique, *Laṭā'if al-Haqā'iq* (True Subtleties).

1977: Annotated *Khātirāt-i Ḥājī Sayyāḥ* (Ḥājī Sayyāḥ's Memoirs); wrote Catalogue of Persian Journals from the Beginning to 1320 AHS/1941; contributed articles to the Festschrifts of Mudarris Raḍavī, Henri Corbin, Ḥabīb Yaghmā'i; edited and published *al-Akyāl wa 'l-Awzān* (Measures of Capacity and Weights), *Jughrāfiyā-yi Kāshān* (Geography of Kāshān), *Muntakhab al-Zamān* (Selections of the Times; on archery), *Fihrist-i Maqālāt-i Irānshināsi dar Zabān-i 'Arabī* (Catalogue of Arabic Articles on Iranian Studies).

1978: Published *Istarābād-nāma* (2nd edition) and *al-Waqfiyyat al-Rashidiyya* (2nd edition); published *Khaṭāynāma* (Accounts of his travels in China), *Hijāziyya* (Accounts of his pilgrimage to Mecca), *Shajara-yi Ṭayyiba* (The Pure Tree), *Jildsāzi dar Ṣaḥḥāfi-yi Sunnatī* (Cover-Making in Traditional Book-Binding; 2nd edition), Catalogue of the Manuscripts at the Central Library and the Center for Archives, University of Tehran; founded and directed the *Sāzmān-i Kitāb Publications*.

1979: Retired from the University of Tehran (June); resumed the publication of the *Āyandih* Journal for 15 years; member of the Anjuman-i Āthār-i Millī (National Monuments Council of Iran) and Societas Iranologica Europaea; wrote reviews on *Nuskhah-hā-yi Khattī* (Manuscripts; no. 8); published *Ma'rifat al-Hawās wa Tartīb Ri'āsāt al-Nās* (Knowledge of the Senses and the Hierarchy of People's Positions), *Ṣaḥḥāfi-yi Sunnatī* (Traditional Book-Binding).

1980: Published *Firdaws al-Murshidiyya fi Asrār al-Ṣamadiyya* with the supplement *Anwār al-Murshidiyya wa Asrār al-Ṣamadiyya* (3rd edition), *Awrād al-Aḥbāb wa Fuṣūs al-Ādāb* (2nd edition).

1981: Published *Dīwān-i Kuhnīh-yi Ḥāfiẓ* (3rd edition), *Lawā'ih wa Lawāmi'* (Slates and Gleams) of 'Abd al-Raḥmān Jāmī, a facsimile edition of the Constantinople edition; wrote reviews on *Sih Risālih dar Taṣawwuf* (Three Treatises on Sufism).

1982: Published *Du Risālih-yi 'Irfānī dar 'Ishq* (Two Mystical

Treatises on Love); *Dīwān-i Gulchīn*.

1983: Published *Majmū'ih-yi Duvvum: Asnād-i Mashrūṭiyyat* 1325-1330 Q (Second Collection: Constitutional Documents 1907-1912), *Manāqib al-Sūfiyya* (Virtues of the Sufis), Catalogue of the Manuscripts Available with the National Library of Malik.

1984: Published *Dīwān-i Wuthūq, Rijāl- Khāṭirāt va Asnād-i Mustashār al-Dawla Šādiq* (Mustashār al-Dawla Šādiq's Memoirs and Documents), *Majmū'ih-yi Avval: Yāddāsh-t-hā-yi Tārikhī va Asnād-i Shakhshīyyat-hā-yi Sīyāsī-yi 'Aṣr-i Mashrūṭiyyat* (The First Collection: Historical Notes and Political Documents of the Figures of the Constitutional Period), *Tadhkira-yi Anjuman-i Nāširī* (biographical accounts of 26 poets flourishing under the Qājār Nāšir al-Dīn Shāh together with sketches of their portraits by Mirzā Ibrāhīm Khān Madā'ih-nigār Tafrishī, a facsimile edition published by Bābak Publications in Tehran), *al-Ma'āthir wa 'l-Āthār* (Achievements and Deeds, vol. 1).

1985: Published Catalogue of the Manuscripts Available with the National Library of Malik, *Tārikh-i Irān dar Dawrih-yi Qājār* (History of Iran under the Qājārs), *Mir'āt al-Safar wa Urdū-yi Humāyūn* (Mirror of the Journey and the Royal Camp; a facsimile edition of a manuscript copied by Kalhur, the calligrapher of renown).

1986: Published *Amīrnāma* (a poetical composition on the conquest of Tehran in the Constitutional Period and the battle with Arshad al-Dawla).

1987: Published Catalogue of the Manuscripts Available with the National Library of Malik, *Jāmi' al-Tawārikh-i Ḥasanī* (Compendium of Histories of Ḥasanī), Persian translation of *Muntakhab-i Mir'āt al-Zamān* (Selections of the Mirror of the Time), *Muntakhab al-Tawārikh* (Selection of Histories).

1988: Published *Āthār wa Ahyā'* (Achievements and the Surviving), *Samariyya dar Mazārāt-i Samarqand va Sā'ir-i Ma'lūmāt-i Rāji' bih Ān Shahr* (The Book of Samar on the Tombs of Samarkand and Further Details Pertaining to That City, 3rd edition), *Tārikh-i Irān dar Dawrih-yi Qājār* (History of Iran under the Qājārs, 2nd edition).

1989: Published *Khulāṣat al-Siyar* (Summary of the Travel Accounts), *Jughrāfiyā-yi Balūchistān* (Geography of Baluchistan,

containing two monographs by Mahdī Qā'inī and an anonymous treatise), *Zindigī-yi Tūfānī* (Tempestuous Life; autobiography), *Qabālih-yi Tārikh* (Deed of History), *Majmū'ih-yi Siyūm: Guzārish-hā-yi Pulis-i Makhfi dar Dawrih-yi Aḥmad Shāh* (Reports of the Secret Police under Aḥmad Shāh), *Chihil Sal Tārikh-i Irān: al-Ma'āthir wa 'l-Āthār* (vols. 2-3); taught at the University of Bern (winter); honorary member of the Institute of Central and West Asian Studies, University of Karachi.

1990: Wrote reviews of '*Ayn al-Waqā'i*', *Falsafih-yi Ishrāq* (*Ḥayāt al-Nufūs*), *Gulshan-i Murād*; published catalogue of Persian manuscripts, Catalogue of Persian Articles on Iranian Studies (vol. 4).

1990: Member of the Board of Experts, Al-Furqān Islamic Heritage Foundation, London.

1991: Edited and published '*Ālamārā-yi Shāh Tahmāsb* (Adoration of the World [a history dedicated to] Shāh Tahmāsb), *Khātirāt va Asnād-i Mustashār al-Dawla Šādiq* (Mustashār al-Dawla Šādiq's Memoirs and Documents); *Majmū'ih-yi Chahārūm: Mashrūt-iyyat dar Ādharbāyjan* (The Fourth Collection: Constitutionalism in Azerbaijan).

1992: Published *Yazdnāmih* (vol. 1), an introduction to *Tārikh va Jughrāfiyā-yi Kuhgilūyih va Buyir Aḥmad* (History of Geography of Kuhgilūyih and Buyir Aḥmad), *Tārikh va Jughrāfiyā-yi Mamasanī* (History of Geography of Mamasanī), *Zabān-i Farsī dar Ādharbāyjan* (Persian Language in Azerbaijan).

1993: Published *Kulliyāt-i Āthār-i Adīb Qāsimī-yi Kirmānī* (Completed Works of Adīb Qāsimī-yi Kirmānī), *Dhayl-i Tārikh-i Guzīda* (Supplement to *Tārikh-i Guzīda*), *Zangīnāma*, Catalogue of Articles in Urdu on Iranian Studies, Catalogue of Manuscripts Available at the Malik National Library, *Rūznāmih-yi Khātirāt-i Sardār As'ad Ja'far Qulī* (Memoirs of Sardār As'ad Ja'far Qulī).

1993-2010: Consulting Editor, *Encyclopedia Iranica*.

1994: *Khātirāt va Asnād-i Mustashār al-Dawla Šādiq* (Mustashār al-Dawla Šādiq's Memoirs and Documents), *Majmū'ih-yi Panjum: Siyāsāt-i Dākhilī-yi Irān dar Dawrih-yi Aḥmad Shāh* (The Fifth Collection: Iran's Domestic Politics under Aḥmad Shāh); wrote introductions to *Tārikh-i Waqā'i-i 'Ashāyirī-yi Fārs* (History of the Events of the Tribes in Fars), *Tārikhnigārān-i Irān* (Historiographers of Iran), *Dastūr-i Shahrīyārān* (Princes' Instructions), *Dīwān-i Ash'ar-i Ashraf-i*

Māzandarānī (Complete Poetical Compositions of Ashraf-i Māzandarānī), *Nāmiḥ-hā-yi Khān Aḥmad Gilānī* (Letters of Khān Aḥmad Gilānī).

1995: Catalogued the Persian manuscripts available with the National Library of Austria (Vienna); published Catalogue of Persian Articles on Iranian Studies (vol. 5); edited and published *Bustān al-'Uqūl fī Tarjumān-i al-Manqūl* (Garden of the Intellects on the Interpretation of the Narrated); published Catalogue of the Library of Muṭabā Mīnuvī.

1996: Edited and published *Mujmal al-Ḥikma* (Synopsis of Philosophy), *Bāznāma* (Falconry), *Yādigār-hā-yi Yazd* (Monuments of Yazd; 2nd edition), *Fihrist-i Alifbā'ī-yi Mu'allifān va Muṣannifān* (An Alphabetical List of Compilers and Authors).

1997: Honorary member of the American Society for Iranian Studies; published *Tuḥfat al-Muḥibbīn* (Souvenir of the Lovers; on calligraphy); *Shahrāshūb* (a poetical genre mainly dealing with different professions); *Mu'izziyya* (a treatise on physiognomy).

1998: Published *Furūghistān* (Land of Light), *Sālshumār-i Waqā'i'-i Mashhad dar Qarn-hā-yi Panjum tā Sizdahum* (Chronology of the Events in Mashhad from the Fifth/Eleventh to Thirteenth/Nineteenth Centuries), *Khāṭirāt va Asnād-i Mustashār al-Dawla Šādiq* (Mustashār al-Dawla Šādiq's Memoirs and Documents), *Majmū'ih-yi Shishum: Nāmiḥ-hā-yi Tabriz az Thiqat al-Islām-i Tabrizī biḥ Mustashār al-Dawla dar Rūzigār-i Mashrūṭiyyat* (The Sixth Collection: Letters from Tabriz written by Thiqat al-Islām-i Tabrizī to Mustashār al-Dawla in the Constitutional Period).

1999: Contributed articles and chapters to *Barg-i Bībargī: Yādnāmiḥ-yi Ustād Riḍā Māyil-i Hiravī* (Leaf of Leaflessness: Master Riḍā Māyil-i Hiravī Memorial Volume), *Mahdavināmiḥ* (Yaḥyā Mahdavi Festschrift), *Yādnāmiḥ-yi 'Allāmiḥ Qazwīnī* (Qazwīnī Memorial Volume).

1999-2010: Published *Pazhūhish-hā-yi Irānshināsī* (Iranian Studies).

2000: Published *Sa'adatnāma yā Rūznāma-yi Ghazawāt-i Hindūstān* (The Book of Felicity or the Accounts of the Battles Fought in India), *Fārs dar Riyāḍ al-Firdaws* (Fārs in Riyāḍ al-Firdaws, the Garden

of Paradise); *Khāṭirāt-i Ḥusām al-Dawla Mu'izzī* (Memoirs of Ḥusām al-Dawla Mu'izzī), *Mujmal al-Tawārīkh wa 'l-Qaṣaṣ* (Selections of Histories and Tales, a facsimile edition of a manuscript dated 751/1350 available at a library in Berlin, published in collaboration with Maḥmūd Umūdsālār by Majmū'ih-yi Nuskhihbargardān, 'Facsimile Collection', Tehran).

2000-2010: Member of the editorial board of *Nāmih-yi Bahāristān* Journal; supervised the publication of *Ganjīnih-yi Nuskhih-bargardān-i Mutūn-i Fārsī* (Treasure of the Facsimile Editions of Persian Texts) in affiliation with Sāzmān-i Gustarish-i Farhang-i Pārsī (Dissemination of Persian Culture Organization; US).

2001: Edited and published *Ma'rifat-i Āfarīnish-i Insān* (Knowledge of the Creation of Man), *Ma'āthir al-Ṣadriyya* (Achievements of Ṣadr), *Būstān-i Sa'dī* (facsimile edition of selections copied by Aḥmad Qawām al-Saḥāna, the Qājār statesman and calligrapher of renown), *Tārīkh-i Sifārat-i Hājji Khalīl Khān va Muḥammad Nabī Khān Sufarā-yi Fath'alī Shāh Qājār bih Hindūstān* (History of the Embassy of Hājji Khalīl Khān and Muḥammad Nabī Khān, the Emissaries of the Qājār Fath'alī Shāh to India), *Barg-hā-ī az Mashrūṭih* (Leaves from the Constitutional Period).

2001-2010: Member of the editorial board of Eurasian Studies (Italy).

2002: Published *Maṭba'ih va Naqqāshī va Khāghaz-sāzī az Maṭla' al-'Ulūm va Majma' al-Funūn* (Printing, Illustration, and Paper-Making, Extracted from *Maṭla' al-'Ulūm va Majma' al-Funūn*, lit. Origin of the Sciences and the Compendium of the Arts), *Du Risāliih-yi Kanāna az Majmū'ih-yi Muṭtabā Mīnuvī* (Two Early Treatises from the Collection of Muṭtabā Mīnuvī; *Yādmān-i Simīnār-i Muqaddamātī-yi Nuskhih-hā-yi Khaṭṭī* (Proceedings of the Preliminary Conference on Manuscripts), *Fihristvārih-yi Kitāb-hā-yi Fārsī* (General Catalogue of Persian Books), *Ḥadīth-i 'Ishq 2: Dānish Pazhūh dar Qalamraw-i Justār-hā-yi Nuskhih-hā-yi Khaṭṭī* (Story of Love 2: Dānish Pazhūh in the Field of Codicological Studies, vol. 1).

2003: Published of the Catalogue of Persian Manuscripts at the National Library of Austria and the State Archives of Austria in Vienna, *Khāṭirāt-i Diwānbiygi az Sāl-hā-yi 1217-1275 Q: Kurdistān va Tihirān*

(Memoirs of Dīwānbiygī between the years 1802-1858), *Jung-i Murtaḍā Qulī Khān Shāmlū* (Miscellany of Murtaḍā Qulī Khān Shāmlū); *Hazār Hikāyat-i Ṣūfīyān* (One Thousand Tales of Sufis)

2003-2010.: Member of the editorial board of the *Ā'īnih-yi Mīrāth* (Mirror of Heritage) Journal.

2004: Wrote an introduction to the Catalogue of the Manuscripts at the Library of Mīrzā Muḥammad Kāzīmāyī (Yazd); edited and published *Kitābfurūshī* (Book Shops [in Iran, A History], vol. 1), *Nāmih-hā-yi Furūgh al-Dawla* (Letters of Furūgh al-Dawla), *Mānīshināsī* (Manichaeic Studies) of Taqīzādīh, *Jawāhir-i Nīzāmī* (Jewels of Nīzāmī) of Jawharī Nīshāburī (in collaboration with Rasūl Daryāg-asht), Catalogue of Persian Articles on Iranian Studies (vol. 6).

2004-2010: Supervised publication of the *Ganjīnih-yi Nashriyyāt-i Advārī* (Treasure of Periodicals), published by Asāṭir Publications.

2005: Produced a facsimile edition of the Shāhnama of Firdawsī from a manuscript at the British Library in collaboration with Maḥmūd Umīdsālār; published *Dhakhīra-yi Khwārazmshāhī* (the Khwārazmshāhid Treasure; 2nd edition).

2006: Edited and published *Khābguzārī* (Interpretation of Dreams together with *al-Ta'bīr* of Imam Fakhr Rāzī, 2nd edition), *Khatm al-Gharā'ib Tuḥfat al-'Irāqayn* (The Most Astounding Thing, also entitled the Souvenir of the Two Iraqs) of Khāqānī Shīrvānī, *Riyāḍ al-Firdaws-i Khānī* (Garden of Paradise of Khānī), *al-Mufīd al-Khāṣṣ fī 'Ilm al-Khawāṣṣ* (The Particularly Useful on the Knowledge of the Elite) attributed to Muḥammad ibn Zakariyā' Rāzī, the 30 volume series of the *Farhang-i Irān-Zamīn* in 15 volumes published by Sukhan Publications.

2007: Edited and published *al-Idāh 'an Uṣūl Ṣīnā'at al-Massāḥ* (The Elucidation of Principles of the Art of the Surveyor), *Asnād-i Tārīkhī-yi Khāndān-i Ghaffārī* (Historical Documents of the Ghaffārī Family, vol. 2: The Qājār Nāṣir al-Dīn Shāh's Autographs), *Manzūmāt-i Sharf al-Dīn 'Alī Yazdī* (Compositions of Sharf al-Dīn 'Alī Yazdī).

2008: Edited and published *Hidāyat al-Muta'allimīn fī 'l-Ṭibb* (Guide of the Students in Medicine), *Shams al-Ḥisāb-i al-Fakhrī* (The Sun of Arithmetic of al-Fakhrī), *Iskandarnāma* (The Book of Alexander), *Ma'rīfat-i Falāḥat* (Knowledge of Agriculture).

2009: Edited and published *Munsha'at* (Epistolary Compositions)

of Sharf al-Dīn 'Alī Yazdī (in collaboration with Muḥammad Riḍā Abū'ī Mahrīzī), *Kitābfurūshī* (vol. 2), Iranian Studies (vol. 18), *Dastūr al-Jumhūr fi Manāqib Sulṭān al-'Ārifin Abū Yazīd Tayfūr* (Instructions to the People on the Virtues of the Sultan of the Mystics Abū Yazīd Tayfūr; in collaboration with Muḥammad Taqī Dānishpazhūh), *Ādāb al-Muḍīfin wa Zād al-Ākilīn* (Etiquette of the Guests and the Provision of the Eaters), *Firūzshāhnāma* (sequel to *Dārābnāma*), *Tārīkh-i Waṣṣāf* (History of Waṣṣāf al-Ḥaḍra); supervised the publication of the Catalogue of Persian Articles (vol. 7).

2010: Published *Akhbār-i Mughulān dar Anbāna-yi Mullā Quṭb* (History of the Mongols in the Satchel of Mullā Quṭb), *Asnād-i Tārīkhī-yi Khāndān-i Ghaffārī* (The Historical Documents of the Ghaffārī Family), *Asnād-i Mi'mārī-yi Irān: Kitābchih-yi Amlāk-i Īnjū-yi Fārs* (Documents on the Architecture of Iran: The List of the Īnjū Ruler of Fārs), Iranian Studies (vol. 19, Dr. Maḥmūd Afshār's Memorial), *Maqālāt-i Taqīzādih: Gāhshumārī dar Irān-i Qadīm* (Taqīzādih's Articles: Chronology in Ancient Iran), Iranian Studies (vol. 20).

NOTES

¹ The title refers to the City of Yazd, well-known as such in Persian classical texts.

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Afkārī, Farībā, "Ustād Afshār va Taqwīm-i Nuskhah-hā-yi Khaṭṭī dar Kitābkhanīh-yi Markazī-yi Dānishgāh-i Tīhrān" (Professor Afshār and Appraisal of Manuscripts at the Central Library of The University of Tehran), the *Bukhārā*, no. 81 (Khurdād-Tīr 1390 AHS/May-July 2001), pp. 520-531.

Afshār, Bābak et al, *Fihrist-i Mawḍū'ī az Nivishtih-hā va Chap-kardih-hā-yi Īraj-i Afshār Marbūṭ bih Sal-hā-yi 1323-1381* (Subject List of Īraj Afshār's Writings and Printed Works Published between 1944-

2002), 4th edition, Los Angeles 2003. Afshar's articles on codicology (36), pp. 41-42; catalogues of manuscripts (53), pp. 42-45; articles on unique manuscripts (69), pp. 45-69.

Idem, "Sargudhasht va Sarnivisht-i Nuskhih-hā-yi Khaṭṭī (The Story and Fate of Manuscripts)", the *Nāmih-yi Bahāristān*, vol. 12, nos. 18-19, 1390 AHS/2011-2012, pp. 11-21. Originally a talk delivered on 30 November 1991 at al-Furqān Islamic Heritage Institute, London. The Persian text also appeared in: the *Majallih-yi Irānshināst* (US), vol. 4, no. 1, (Spring 1992), pp. 31-47.

Anvār, Sayyid 'Abd Allah, "Iraj Afshar, Kitābshinās, Nuskhihshinās," (Iraj Afshar, Bibliographer, Codicologist), the *Bukhārā*, ibid, pp. 461-472.

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IRAJ AFSHAR'S APPROACH TO CATALOGUING AND EDITING MANUSCRIPTS

This section will endeavour to summarise Afshar's views and methodology relating to cataloguing and editing manuscripts. These can be

ascertained from his numerous books and articles, as well as from a lecture delivered at the al-Furqān Institute, London, on 30 November 1991.

Cataloguing manuscripts in Iran, irrespective of the language of the manuscripts—Persian, Arabic, and Turkish in the main—is mainly based on the subject or call number, rather than the language itself.

Understanding the state of Persian manuscripts and their cataloguing and editing is significant for at least two reasons. Firstly, a survey of the colophons and the writing styles of manuscripts reveals that they have been written and copied over six to seven centuries in all Persian speaking territories, or at least in those where there was some degree of acquaintance with Persian literature.

A plethora of Persian manuscripts are to be found in library collections, public and private, in Arabic speaking countries such as Syria, Egypt and Iraq, as well as in the Indian subcontinent and the Ottoman Empire and its territorial lands, for example the Balkans. Such rich collections reveal that Persian was used at court as well as in literary circles in these lands. These manuscripts may be distinguished by their specific styles of illustration and writing.

Secondly, collections of Persian manuscripts can be found today in a wide range of countries, comprising Persian speaking countries such as Iran, Afghanistan, and Tajikistan; their neighbouring countries, i.e. India, Pakistan, and Turkey; as well as many other countries the world over. Unfortunately, a large number of manuscript collections are still uncatalogued and no exact statistics are available to us.

Many significant Persian manuscripts bear their regional identities. Instances include those written by the Persian authors of the Indian subcontinent, particularly from the seventeenth to the nineteenth centuries. A large number of these are still available there and may be used by scholars researching different fields, including Indian history, Hindu literature in Persian, and the Sufi orders of India, for example the Chishtiyya, Qādiriyya, Nūrbakhshiyya, and Suhrawardiyya. Similarly, the manuscript collections of Transoxiana, in cities like Tashkent, Dushanbe, Samarqand, and Bukhara, can be consulted and used for a vast array of studies, one instance being the Sufi orders of Transoxiana, e.g. the Khwājagān and Naqshbandiyya.

The majority of the local histories of Iran written in the last two centuries existed in public and private collections which now reside in the National Library of Iran, the Gulestan Library, the Majlis Library, or the Malek Library, with some others in Mashhad, Tabriz, Shiraz, and Isfahan.

The geographical distribution of Persian manuscripts around the world serves as an impediment to locating and using them. To overcome this hurdle – as discussed in different seminars and conferences, for example *Colloque de codicologie et de paléographie des manuscrits du Moyen-Orient* (Istanbul 1986) – a number of strategies may be adopted (see below).

Systematic codicological training and exposure to different manuscripts under the supervision of experts may assist cataloguers in gaining further knowledge and experience in an array of topics, including sources, references, types of paper, handwriting, binding, illumination, and illustration.

The availability of printed books and the focusing of librarians on the printed material has marginalized the study of manuscripts and inhibited the adoption of universal criteria for cataloguing them. Nonetheless, a number of book connoisseurs over the last six or seven decades have handed down their expertise to the next generation and thereby preserved their traditional knowledge of codicology. Among these are Muḥammad Qazvīnī (1877-1949), Muḥammad 'Alī Tarbiyat (1874-1939), Muḥammad Nakhjavānī (1881-1962), Ḥusayn Nakhjavānī (1882-1973), Muḥammad Mishkāt (1901-1980), Muḥtabā Mīnuvī (1902-1976), Muḥammad Taqī Mudarris Raḍavī (1895-1986), Ja'far Sulṭān al-Qurrā'ī (1904-1988), and Mahdī Bayānī (1906-1967).

Other early, distinguished cataloguers include Qā'ān Mīrzā Uktā'ī (d. 1890; Mashhad), Abū 'l-Qāsim I'tiṣām al-Mulk (1874-1937; Majlis), Ḥadā'iq Shīrāzī (1905-1987; Sipahsālār), and 'Abd al-'Azīz Javāhirkalām (Ma'ārif). These individuals from the first period of cataloguing strove to combine their own traditional knowledge and standards with those of the Orientalists as reflected in their manuscript catalogues.

Notable cataloguers from the second period, who enabled the discipline of manuscript cataloguing to flourish in Iran, include Muḥammad

Taqī Dānīshpazhūh (1911-1996), 'Alīnaqī Munzavī (1923-2010), Aḥmad Munzavī, Mahdī Valā'ī (1902-2002), Aḥmad Gulchīn Ma'ānī (1916-2000), 'Abd al-Ḥusayn Ḥā'irī, and 'Abd Allah Anvār.

The third period of cataloguing, covering the last two decades, has witnessed the emergence of a large number of expert codicologists and literary figures contributing to the field.

Academic codicology in Iran requires the use of a consistent series of principles and standards. In 1991 Muḥammad Taqī Dānīshpazhūh, in collaboration with the Department of Library Studies, succeeded in introducing a special program on academic codicology and cataloguing of manuscripts at the University of Tehran's Central Library.

Unfortunately, catalogues of Persian manuscripts prepared in Iran lack consistency in their use of codicological principles, standards, and terminology. Each cataloguer prepares the hand-lists or catalogues based on his own knowledge and experience, at times benefiting from the registers and the manuscripts' own notes. Furthermore, some Western cataloguers, unaware of the intricacies of traditional oriental manuscripts, have exclusively followed occidental principles and standards.

Compilation of a standard manual of codicology, including a terminology with precise and standard definitions and their English equivalents, is still a desideratum, and works like Mahdī Bayānī's *Kitābshināsi-yi Kitāb-hā-yi Khaṭṭī* (A Codicological Study of Manuscripts; Tehran 1953) and Riḍā Māyil Hiravī's (1921-1991) *Lughāt va Iṣṭilāḥāt-i Fann-i Kitābsāzī Hamrāh bā Iṣṭilāḥāt-i Jildsāzī, Tadhīb va Naqqāshī* (Terminology of the Art of the Book along with those of Binding, Illumination, and Illustration) are incomplete and outdated. A further step would be a comparison of the terms used in the Persian tradition with those commonly used in Arabic, Turkish, and Urdu. The problem does not simply lie in the fact that the principles and terminology of Persian manuscripts are not academically recorded, but that many terms used in the Persian codicological tradition are unknown to us. For instance, the names of thirty-one types of paper have been extracted from the collation notes and marginalia of Persian manuscripts and classical texts, but the precise significations of these terms are not known.

A solution to this issue would be to prepare a corpus or database of all the sources on different aspects of codicology, e.g. those on calligraphy, binding, and papermaking. Some of these have been edited, translated, and published, such as *Gulistān-i Hunar* (Rose Garden of Art) by Vladimir Minorsky and later by Aḥmad Suhaylī Khwānsārī, *Risālih-yi Rang-i Kāghadh-i Sīmī-yi Nīshābūrī* (Treatise on the Color of the Paper of Sīmī of Nishabūr) by Louise Marlow, and *Ishārāt* (Instructions) by Yves Porter. It may also be suggested that in order to gather the original forms of the terms and to systematically collect the codicological data, one should study the collation notes ('*arḍ*') and the marginalia on codicological features of oriental manuscripts. One instance of such a work is the valuable list on the manuscripts of Saḥī al-Dīn Ardabīlī's collection, prepared in 1758 by Sayyid Yūnusī (Tabriz 1969), entitled *Ganjīnih-yi Ṣaḥī* (The Treasure of Ṣaḥī). This serves as a good example for anyone wishing to acquaint themselves with the traditional terms used by early collectors and manuscript connoisseurs.

An accurate assessment of the number of manuscripts in Iran cannot be given, since they are scattered in public, academic, and private library collections as well as government administrative buildings, mosques, and shrines. However, it may be roughly estimated that their number exceeds 200,000, half of which are likely to be in Arabic. It may also be estimated that approximately 60,000 manuscripts have been hand-listed or catalogued in printed catalogues, periodicals, and the introductions to editions of classical texts. Accordingly, it may be surmised that approximately 140,000 manuscripts have yet to be catalogued or hand-listed. In addition, a proportion of the recent acquisitions made by major libraries in Iran, such as the Majlis Library, the Central Library of the University of Tehran, the Mar'ashī Library in Qum, the National Library of Iran, and the Center for the Great Islamic Encyclopaedia, remain uncatalogued.

Given the plethora of unknown and uncatalogued manuscripts, cataloguers must prioritise those most in need of editing or bringing to the attention of the scholarly world. Each library is supposed to publish the hand-lists or catalogues of its entire manuscript collection. However, given the time, energy, and funding required for this, experts in codicology and textual criticism should instead be consulted to

prepare catalogues and preferably hand-lists of selected manuscripts in order to pave the way for further studies. For instance, the majority of manuscripts for general histories of Iran have not been critically catalogued. Significant works of this type include: Rashīd al-Dīn Faḍl Allah Hamadānī's *Jāmi' al-Tawārīkh*; Ḥāfiẓ Abrū's *Zubdat al-Tawārīkh*; Khwāndmīr's *Ḥabīb al-Siyar*; Mīr Khwānd's *Rawḍat al-Ṣafā*; Muḥammad Ṣafī Qazwīnī's *Khuld-i Barīn* on general histories; Sharaf al-Dīn 'Alī Yazdī's *Zafarnāma*; Iskandar Biyk Munshī's '*Ālamārā-yi 'Abbāsī* on dynastic histories; Tāj al-Dīn Ḥasan Nizāmī Nīshābūrī's *Tāj al-Ma'āthir* on the history of India; *Hasht Bihišt* on Ottoman history; the works of Rashīd al-Dīn Faḍl Allah Hamadānī, e.g. *Taqrīzāt*, *As'ila wa Ajwiba*, and *Majmū'at al-Rashīdiyya*; Muḥammad ibn Abī Zayd ibn 'Arabshāh 'Alawī Warāmīnī's *Aḥsan al-Kibār fī Ma'rifat al-A'immat al-Athār* on the biographical accounts of Shī'ī scholars; Qāḍī Nūr Allah Shūshtarī's *Majālis al-Mu'minīn* on the biographies of Shī'ī religious scholars flourishing up to the seventeenth century; and even Mullā Ḥusayn Kāshifī's *Rawḍat al-Shuhadā*.

The large number of such classical sources has always impeded a critical evaluation and prioritisation of the manuscripts. To overcome this, a chronological list of classical Persian texts based on their manuscripts could be prepared. A critical and standard list of selected sources in all disciplines may help with the introduction of works of significance, such as Nizāmī's (fl. 12th century) *Jawāhir-nāma* on gems, which Naṣīr al-Dīn al-Ṭūsī incorporated in its entirety into his *Tansūkh-nāma* without even naming his source.

Two, more or less forgotten, aspects which should be considered when studying Persian manuscripts are: (i) the material, apparent, and artistic features, and (ii) the writing style, shown through the forms of words and the linguistic intricacies as opposed to the calligraphic and artistic features. Regarding the former, although some experts have delved into the codicological aspect and have offered classifications, teams of experts are needed to fully assess the dates and locations where manuscripts were produced and suggest consistent, academically rigorous standards. Contributions in this domain include the monographs of scholars like Basil Gray, B. W. Robinson, and Ernest Grube, as well as the catalogue of Persian illustrated manuscripts held at the

Dār al-Kutub al-Miṣriyya that was produced by Naṣr Allah Mubashshir al-Ṭirāzī. Despite these contributions, the arts of Persian Folkloric, religious, and regal books are not sufficiently known and further studies must be conducted on binding, particularly Persian binding.

Concerning the second aspect, the copyists' dialects are reflected in their specific vocalization of words. This is something of particular significance for Persian philological studies. Another feature is the particular forms of the words and how they join together when used in compounds. This varies over time according to the copying styles used in different regions, and also to some degree due to the copyists' own idiosyncratic writing styles. When considered alongside the logic of orthography and language, this may contribute to finding solutions to orthographic issues.

The catalogues of Astān-i Quds (Mashhad) and Majlis (Tehran) were the first to appear in Iran, in 1926. Since then, manuscript catalogues have appeared intermittently, depending upon funding and historical events. At present there are no plans to prepare catalogues or even hand-lists for the manuscripts scattered in small libraries in Iran. Major libraries, on the other hand, have published catalogues of their manuscript collections, instances of these include: the National Library ('Alīnaqī Munzavī); Majlis Library ('Abd al-Ḥusayn Ḥā'irī); Mar'ashī Library, Qum (Aḥmad Ḥusaynī Ishkivarī); the Central Library of the University of Tehran (Muḥammad Taqī Dānishpazhūh); and the library of the Center for the Great Islamic Encyclopaedia (Aḥmad Munzavī).

It may be estimated that the number of Persian manuscripts catalogues published in different countries exceeds one thousand. Afshar's assessment of such catalogues, commissioned by UNESCO and published in 1958, is outdated. Al-Furqān's *World Survey of Islamic Manuscripts* (4 vols., 1992-1994, including the collections in 105 countries) is a more recent contribution.

Persian periodicals devoted to the study of Persian manuscripts include: *Nashriyyih-yi Nuskhih-hā-yi Khaṭṭī* (12 vols. 1960-1983), published by the Central Library and the Center for Archives of the University of Tehran; *Āshna'ī ba Chand Nuskhih-yi Khaṭṭī* (Acquaintance with Some Manuscripts 1976-), published by two seminarians, Ḥusayn Mudarrisi Ṭabāṭabā'ī and Riḍā Ustādī; and *Nāmih-yi*

Bahāristān (20 vols., 2002-2014), published by the Library, Museum and Documentation Center of the Islamic Consultative Assembly, (Majlis-i Shūrā-yi Islāmī).

Collective cataloguing of manuscripts is not a commonly used practice, but it could be encouraged to facilitate the task and attain better results. Such catalogues prepared in Iran include: the catalogue of the Madrasa-yi Sipahsālār by Muḥammad Taqī Dānishpazhūh and 'Alīnaqī Munzavī; the catalogues of six library collections in Mashhad by Kāzīm Mudīr Shānihchī (1927-2002), 'Abd Allah Nūrānī (1929-2011), and Taqī Bīnīsh (1928-1996); the catalogue of the library of the National Consultative Assembly (Majlis-i Shūrā-yi Millī), vols. 11-16; and the catalogue of the National Library of Malik, presented in nine volumes by ten cataloguers.

A union catalogue in Persian was first prepared by Aḥmad Munzavī, who had been inspired by C. A. Storey's ground-breaking work. Munzavī had collaborated with his father, Āqā Buzurg Ṭīhrānī, in the compilation of the voluminous bibliographical work, *al-Dharī'a ilā Taṣānīf al-Shī'a*. In 1969 Munzavī made attempts at compiling a union catalogue incorporating all the published manuscript catalogues as well as all other manuscripts that had been catalogued both in Iran and abroad. He succeeded in publishing six volumes of his union catalogue.

Publication of the catalogue was stopped while Munzavī was still in charge. Instead he travelled to the Iran Pakistan Institute of Persian Studies in Rawalpindi, Pakistan and presented a new project related to manuscripts there. He published 13 volumes of his union catalogue of Persian manuscripts in Pakistan between 1983 and 1997. This includes a documented subject index of Persian manuscripts and printed books arranged by title and is not restricted to only Persian manuscripts located in Pakistan.

Further union catalogues include that of the Arabic manuscripts in Iran prepared by Muḥammad Bāqir Ḥujjātī. Two volumes of this were published in 1990, arranged by subject, date of copying, and title. The union catalogue of A. M. Piemontese (*Catalogo dei manoscritti. Persiani conservati nelle biblioteche d'Italia*, 1989), detailing 439 Persian manuscripts in library collections in different cities, may serve as a good model for such union catalogues.

The first person in Iran to prepare photos and microfilms of manuscripts of classical sources for use in editing and publication was Muḥammad Qazvīnī (1877-1949) in 1925. These are all available now at the National Library of Iran. However, Henri Corbin, in his capacity as the Director of l'Institut français d'iranologie de Téhéran (IFIT), was the first person to prepare microfilms of certain philosophical, mystical, and historical manuscripts, some of which belonged to private collections.

Mujtabā Mīnuvī spent six years in Turkey preparing microfilms of manuscripts which are now at the Central Library of the University of Tehran. To this was later added the collection of microfilms prepared by Dhabīḥ Allāh Ṣafā at the then British Museum Library (moved later to the British Library) and the Bibliothèque nationale de France. A three-volume catalogue of approximately 7,500 microfilms from this collection - a large number of which came from private collections - was prepared and published by Muḥammad Taqī Dānīshpazhūh. Āstān-i Quds library also has microfilms, though its catalogue has not been published. The National Library of Malek has prepared microfilms of its manuscript collection, but the catalogue has not yet been published. The first volume of the microfilms, including 500 out of 2,000 microfilms at the Mar'ashī Library in Qum, has appeared.

Afshar's views and suggestions regarding cataloguing and critically editing manuscripts may be summarised as follows:

- Foundation of a centre for training codicologists and cataloguers of manuscripts in line with academic principles and standards.
- Compilation, in both Persian and English, of a manual of codicology and cataloguing for those studying and cataloguing Persian, Turkish, and Arabic manuscripts.
- Compilation of a brief survey of the manuscript collections in Iran and collation of relatively reliable statistics.
- Preparation of a union catalogue of Persian manuscripts whose catalogues have been published both in Iran and abroad whether in Persian or other languages, along with indices of titles, authors, copyists, and subjects.
- Preparation of hand-lists of uncatalogued Persian manuscripts in Iran

and abroad, taking into account the priorities of the subjects of the manuscripts.

- Preparation of a chronological list of early manuscripts to be used in the standardisation of Persian orthography and pronunciation up to the ninth/fifteen century.
- Collection of the collation ('*arḍ*') notes of Persian manuscripts and early catalogues containing bibliographical data, to aid in the standardisation of terminology as well as the principles and standards of codicology and cataloguing.
- Preparation of a list of selected classical Persian texts and their manuscripts to assist in the production of critical editions of those texts.
- A distinction, not necessarily a very clear one, must be drawn between bibliography and codicology on the one hand and textual criticism and cataloguing on the other. Codicological principles, e.g. the standards of punctuation and vocalisation, were accorded less significance in the Persian tradition of cataloguing prior to the preparation of the catalogue of manuscripts in the National Library of Iran.
- Cataloguing is a relative and conventional process depending on an array of factors, such as the extent of inclusion of data; the cataloguer's knowledge, time, and precision; and the funding required for the cataloguing and publication of the catalogue/hand-list. For instance, a hand-list would suffice for a collection of 100 manuscripts, the majority of which bear no particular significance, whereas a royal library collection would require a catalogue *raisonné*.
- Instead of including elaborate descriptions of the contents for the majority of manuscripts, references should be made to standard references like Storey, Aḥmad Munzavi's union catalogues, and Rieu.
- It would require less time, energy, and funding to merely prepare hand-lists of uncatalogued manuscript collections, leaving further details to be included in catalogues at a later stage, depending upon the significance of each individual manuscript.

Iraj Afshar, A Peerless Codicologist

AKBAR IRANI
(Editor from Iran – London)

فَا كَانَ قَيْسٌ هُلْكَه هُلْكَ وَاحِدٍ وَلَكِنَّه بَنِيَانُ قَوْمٍ تَهْدِمَا

WEDNESDAY, MARCH 9, 2011 marked a watershed event in Iranian studies because it was the day when Iraj Afshar, who impacted this discipline more profoundly than any other scholar, passed away. Born into a prominent family, influential in business and scholarship, Afshar devoted his entire adult life to Iranian Studies. When he passed away at the age of 86, at Jam Hospital in Tehran, he had amassed an impressive bibliography, and had trained or influenced a generation of scholars.

Referring to Iraj Afshar as the 20th century's most productive and influential codicologist, cataloguer, historian, and scholar of Persian texts is no exaggeration. The bibliography of his published work and the list of his services to Iranian studies are awe inspiring in their extent and authority, and bring to mind the words of the Arab poet, Abū Tammām:

إِذَا شِئْتَ أَنْ تُحْصِيَ فَضَائِلَ عَلَيْهِ فَكُنْ كَاتِباً أَوْ فَاتِحِذَ لَكَ كَاتِباً

Much has been written about the reasons behind Afshar's unusual productivity. Few people who knew him would disagree that he was not one to waste time and that it was his aversion to wasting time that helped him build the remarkable monument that forms his collected

oeuvres. Aside from this, a concomitation of several fortuitous circumstances in his private life contributed to his remarkable success as a scholar. First, he was born into a highly cultured and wealthy family and could devote his life to scholarly pursuits without having to worry about material concerns. Second, he was highly motivated, intellectually disciplined, and blessed with the kind of inner peace and tranquility that allowed him to focus on what he studied with remarkable single-mindedness. Third, he approached every problem methodically, scholastically, and was willing to learn from his own and from others' mistakes. Fourth, he was endowed with the natural curiosity of a child, a remarkable memory for detail, and a profound belief in his mission of cultural service to his country. Fifth, Afshar did not suffer from that variety of narcissistic perfectionism which afflicts many in academia. That is, he did not believe that his finished work had to be perfect. Rather, he was of the opinion that other scholars, especially the younger researchers, could, and eventually would correct his mistakes. This characteristic significantly contributed to his ability to carry out quickly every project that he undertook. I do not mean to imply that he was sloppy, far from it. However, he did not allow obsessing with insignificant detail, slow him down and he was able to complete what he meant to complete rapidly and managed to blaze trails into such areas of Iranian studies that had remained untouched before he turned his attention to them.

THE RANGE OF AFSHAR'S SCHOLARLY ACTIVITIES

The extent and variety of Afshar's contributions to scholarship are truly impressive. He published several accounts of his frequent travels in Iran and abroad. These travelogues are full of historical, geographical, cultural, and codicological information. All villages, towns, and natural sites that he came upon and knew were significant for some historical reason, are described in detail and changes in their names, topography, as well as all other relevant information about them, are carefully recorded. Whenever he came upon a significant manuscript in some bucolic mosque or private collection, he took pains to carefully describe it. Afshar's habit of doing so proved fortunate, because some of these codices are now lost, sold to private collectors who keep them out of

scholars' reach, or have disappeared altogether; with Afshar's description of them being the only dependable account of their existence.

Afshar was meticulous in choosing treatises for publication and would tend to concentrate on works that had not only historical and literary but also cultural significance. For instance, his editions of cookbooks from various periods of Iranian history provide important windows into the history of the food culture in Iran. His love of such diverse areas of learning as, calligraphy, history, medicine, gemology, ethics, *mirabilia*, historical geography, art history, local history, *diplomats*, history of endowments, agriculture, traditional book-keeping, the arts of the book, travel books, and weights and measures, is evident from the numerous books and treatises about these subjects that he either edited personally, or supervised. Among these, he considered the more esoteric texts as more important, because he believed that most scholars tend to be attracted by texts that deal with traditional fields of learning, and would neglect the editing and publication of manuscripts that concern obscure subjects. For this reason, he rarely approached the editing of mystical texts, and believed that these works would attract many editors and would hardly remain unedited while treatises about esoteric subjects might.

Although Afshar could easily read classical Arabic, he never attempted to edit any Arabic texts, and concentrated exclusively on Persian because he never felt that he had an adequate enough command of the language to enable him to do a competent job of it. Similarly, in spite of the fact that he was familiar with English, French, and German, he never translated anything from these languages. We do, of course, have the texts of several presentations in European languages that he read at a number of international conferences, but no translations. His modesty in this regard and his ability to set limits for himself denote his great practical wisdom.

Afshar was especially keen on collecting and publishing memoirs and private correspondences of important cultural and historical personages. His reputation for dependability and trustworthiness, and the impressive resources of his father's Endowment that were at his disposal persuaded many owners of manuscripts, historical letters, documents, and other private papers to trust him with their publication. His publi-

cation of the private notes and correspondences of such luminaries as Dehkhodā (1879-1956), Muhammad Qazvini (1877-1949), Taqizada (1877-1969), Dr. Musaddiq (1882-1967), and others, is the evidence of his passionate attention to this important area of social history (see below).

THE VARIETY IN AFSHAR'S WORK

Iraj Afshar's cultural and scholastic activities lasted approximately sixty-five years. Two bibliographies of his works have been published so far. The first was compiled and published by his sons in Los Angeles in 2003 to which they added a supplement in 2004. The second, that was a revision and extension of the first, was undertaken by Farid Qasemi, who devoted a long section of his book-length treatment of Afshar's publishing career, entitled *The Publisher Iranologist (īrānshīnās-i majalla-nigār)*, Tehran, 2011 to listing his bibliography. A more complete and updated version of Professor Afshar's bibliography is now in press in Tehran.

Afshar rarely published research monographs on specific subjects and preferred to concentrate on editing, manuscript cataloguing, and bibliographic work. His first experiment with editing Persian texts involved Fritz Meier's earlier edition of *Firdaws al-Muršidiyya fī Asrār al-Samadiyya* by Mahmūb ibn Uthmān (8th century A.H.). Meier had previously edited the text based on two manuscripts from Turkish libraries, and had issued his edition in Istanbul in 1943. However, this edition was destroyed in World War II, and had to be reprinted from the few surviving copies in 1948. Afshar augmented Meier's edition by adding his own edition of an abridged version of the text, together with the Persian translation of Meier's German introduction and several scholarly essays to the volume before issuing it in 1952.

Following the publication of *Firdaws al-Muršidiyya fī Asrār al-Samadiyya*, Afshar produced many other editions and built an impressive body of work in this area. He never slowed down as an editor, and was editing other classical Persian texts during the last months of his life. A number of younger scholars, whom he had taken under his wings, were co-operating with him on these projects. By the time of his death in 2011, some ten different editions and monographs that he

co-authored with his younger collaborators have appeared, and more are scheduled for publication in the next two years. He was so careful about completing these joint projects that in his will, he had determined which one of his young colleagues should finish which joint project.

Afshar edited and published some seventy Persian texts before his death, with five to ten others waiting in the wings. These were scheduled for publication in 2013. Additionally, ten volumes of his correspondences with important literary, scholarly, and political figures are being prepared for publication. I have counted nearly 120 treatises of various lengths that Afshar edited and published in different journals. Additionally, he edited and published some 30 volumes of bibliography, memorial volumes, collections of papers, and manuscript catalogues, either single handedly or jointly with others. He also wrote nearly 700 necrologies and brief notices that appeared in various scholarly and literary journals. These have been collected and published by Mr. Nikooyeh in an independent volume of some 1200 pages, under the title of *Nādira Kārān*. Their editor's aim, as he points out in his introduction to the volume, is to make them easily accessible to researchers. One can confidently say that the total corpus of Afshar's output in short essays and articles, amounts to some 3000 items. This is quite an impressive legacy and reminds one of the verse:

إِنَّ الزَّمانَ بِمَثَلِهِ لَعَقِيمٌ

مِهْيَاطَاتِ أَنْ يَأْتِيَ الزَّمانَ بِمَثَلِهِ

AFSHAR AS AN EDITOR

Those who knew Professor Afshar, know that he did not choose texts for editing willy-nilly. He was careful to rank the manuscripts that he considered important, and prioritise their editing and publication, based on their potential impact on Iranian studies in general. As I pointed out earlier, texts that might be important for the historical sociology of the Iranian culture, but were likely to be neglected by textual scholars, had a special attraction for Afshar. For instance, although the majority of classical Persian texts that deal with mysticism deal with the subject from a theoretical or doctrinal point of view, few of them actually provide detailed information about the day-to-day lives of the Sufis, the

organisation of their *khānaqāhs*, or the nature of their social interactions with the outside world. The Sufi text, *Awrād al-Ahbāb wa Fusūs al-Ādāb*, that was composed in 724/1324 by Abū al-Mafākhir Yahyā Bākharzī, is an exception in this regard. It actually contains important details about the daily lives of the Sufis in its second part. For this reason, Afshar decided to publish the latter part of the text in 1345/1967. He did so because this section includes valuable information about the details of admission into the sect, the practice of *samāʿ*, Sufis' eating etiquette, their travels, and other such sociologically significant data.¹

Afshar's editions of classical Persian texts on traditional Persian agriculture were also chosen with an eye to the sociologically useful information that they could offer. Rašīd al-Dīn Fazlollāh-i Hamadānī's treatise, *Āthār wa Ihyāʾ*, is one such text that is not only one of the oldest treatises of its kind, but is also a goldmine of sociological information. No complete manuscript of this work has hitherto been identified. What does exist seems to be selections of the complete treatise of which 'Abd al-Ghaffār Najm al-Dawla first published a lithograph edition in 1323/1905. Afshar located two other manuscripts of the work and edited it with the help of his life-long friend, Professor Manouchehr Sotoudeh in 1368/1990. Later, he edited another text called *Maʿrafat-i Falāhat*, which was composed by 'Abd al-'Alī-yi Bīrjandī (d. 934/1527). This volume was published by the Miras-e Maktoob in 1387/2009.

Another variety of non-traditional texts to the editing and publication of which Afshar devoted considerable effort and energy, is the history of cooking. When he edited the journal, *Farhang-e Irānzamīn*, Afshar published a treatise on cooking entitled, *Mādat al-Hayāt*, in that journal in 1333/1955. The author of this treatise was a certain Nūrullāh, who served as the royal chef to King 'Abbās I (1587-1629 CE). Later, in 1360/1982 he republished this treatise along with another book on cooking called *Kārnāma* [Workbook]. The author of the *Kārnāma* was a man named Muhammad 'Alī Bāvarchī. The two treatises appeared in a volume entitled, *Āšpazī-yi Dawra-yi Safavī* [Cooking in the Safavi Period]. He then edited a work in verse by the Sufi, Muhammad of Herat (9th/15th century), which included sections that dealt with the art of cooking. This treatise is considered to be the second oldest work on food and cooking after the *divan* of Bushāq-i At'ima (d. 827/1424 or

838/1434). It was published by the Miras-e Maktoob in 1386/2008 in Tehran.

Afshar was deeply attached to Yazd, his native city, and to the local history, on which he edited and published several important works. Among these, one may point to *The History of Yazd*, which is among the older local histories in Persian (9th/15th century) written by Ja'far ibn Muhammad ibn Hasan al-Ja'fari (Tehran, 1338/1960), *Tārīkh-i Jadīd-i Yazd* [Yazd's New History], composed after 862/1458 by Ahmad ibn Husain ibn 'Alī al-Kātib (Tehran, 1345/1967), and the *Jāmi'-i Ja'fari*, by Muhammad Ja'far ibn Muhammad Husain of Nā'in who used the pen-name, *Tarab* (Tehran, 1353/1975). One of the most important texts, was the *Jāmi'-i Mufīdī* of Najm al-Dīn Muhammad-i Mustawfī of Bāfq that was composed between 1082 and 1090/1672 and 1679. This text was published in two volumes between the years 1337/1358 and 1341/1962. Afshar also published a number of important treatises that although not about the history of Yazd per se, were authored by other sons of his native city. An important example of these was the historical treatise, *Sa'ādatnāma*, or the chronicle of wars in India, by Ghiyāth al-Dīn 'Alī of Yazd that was issued by the Miras-e Maktoob in 1379/2001.

Professor Afshar was especially keen on publishing important collections of correspondence and official documents. There was a tradition of making copies of well-written and important documents in Iran of the classical period and these collections, which were often composed by important bureaucrats, were carefully transmitted and studied as a matter of bureaucratic education. Some of these were published by modern scholars of classical Persian, who considered them important as samples of good writing.² Others that were comprised of copies of diplomatic communications between Iran and the neighbouring countries, or were replicas of royal decrees and were significant for the study of Iran's political history, had been published by various researchers. However, one can confidently say that the majority of these documents never attracted the attention of Iranian scholars. It was Afshar who consistently and systematically devoted time and resources to the study, editing, and publication of documents such as deeds of trust, official decrees, religious verdicts, and correspondence of the literati of earlier periods. One of the most important of these collections is a compilation

entitled, *al-Mukhtārāt min al-Rasā'il*, the manuscript which belongs to the Vaziri Library of Yazd. Afshar first published a facsimile edition of this codex in 1355/1977, and later in 1378/2000, edited and published the text together with Gholamreza Taher and Maryam Mirshamsi in Tehran. I have already mentioned the valuable deed of trust of the Rab'i Rašidi, of which Afshar published a facsimile edition in 1350/1972, and followed it with an edition of the text that he did with the help of Professor Minovi and published in 1356/1978. This trust instrument is a remarkable document, full of useful information about the Iranian society during the Mongol period. It is especially useful about the way deeds of trust for large cultural and educational institutions were prepared. Together with Professor Daneshpazhuh, Afshar published another instrument of trust, entitled *Jāmir' al-Khayrāt* or *Waqfnāma-yi Sayyid Rukn al-Dīn-i Yazdī*, published in the journal, *Farhang-e Irānzamīn*. This document is in Arabic and bears seals that were applied between the years 733 and 748/1332 and 1347. Another document of this kind is the collection known as the *Furūghistān*. This important document was composed by Muhammad Mahdī of Khurāsān in 1258/1842 on the subject of tax accounting (*istīfā*). Afshar edited this work and published it in the Miras-e Maktoob series in 1378/2000.

Classical Persian texts that dealt with science or *mirabilia*, were especially attractive to Professor Afshar. He edited and published more Persian texts of this kind than any other Iranian editor. The first scientific work that Afshar edited and published in 1345/1967, was a text on gemology, entitled the '*Arāyis al-Jawāhir wa Nafāyis al-Atyāb*, which was composed in 700/1300 by Abū al-Qāsim 'Abdullāh of Kāšān. Prior to the publication of this text, no other work on gemology had been published in Iran.' The '*Arāyis al-Jawāhir wa Nafāyis al-Atyāb* is not only an important text on gemology, but also contains important information about making traditional perfumes and glazed tiles. Afshar edited another treatise on gemology, which was published by the Miras-e Maktoob in 1383/2005 in Tehran. This was Muhammad ibn Abī al-Barakāt al-Jawharī of Nīšābūr's work entitled the *Jawāhirnāma-yi Nizāmī*. The *Jawāhirnāma-yi Nizāmī*, was written in 592/1196, and is considered the oldest known Persian treatise on the subject. Its additional value as a source of archaic technical vocabulary in Persian cannot be

exaggerated. For his edition of this text, Afshar could only find and collate five incomplete manuscripts. Because of the challenges that the state of his witnesses presented, Afshar decided to apply the method that is sometimes called “eclecticism” in textual scholarship. That is, he established the text by drawing not only on the testimony of his witnesses but also on information in ancillary sources such as Bīrūnī’s *al-Jamāhir fī al-Jawāhir*. He was impressively successful in restoring the technical vocabulary of this text. Afshar pointed out that because of the nature of distortions that one finds in technical and scientific texts, this approach is often the only method that can actually yield results. We owe the authoritative published text of this work to Afshar’s skill and acumen as an editor.

One of the most important features of Afshar’s editions is that all of them have extensive bibliographies and multiple indices and supplements. Some of these bibliographies are incorporated into Afshar’s scholarly introductions, while others are added as supplements to the end of the volume. Drawing on his vast command of bibliography, Iraj Afshar tends to list all the important known manuscripts of the work, the known editions of it, and any important scholarly works that may have been published about it. Few other scholars, had his command of the sources, and fewer still had the scholastic rigor and discipline to include such information in editions that were produced in Iran in the middle of the twentieth century. Here are some examples of Afshar’s thoughtfulness in this respect: He added twelve supplemental sections to his edition of the *Furūghistān* that was published by the Mīras-e Maktoob in 1378/2000. Among these, the second is a list of books on *siyāq* (pp. 281-291), which although relatively short, is the only existing list of its kind in Persian. Similarly, a list of works on agriculture, forms the third part of Afshar’s extensive introduction to his edition of the *Āthār wa Ihya’*. The bibliography of cookbooks in Persian and Arabic that Afshar appended to his *Āspazī-yi Dawra-yi Safavī* (2nd printing, 1389/2011) is truly exhaustive and very useful, as are the five supplements to his edition of the *Jawāhirnāma-yi Nizāmī*. The latter includes a list of the text’s known manuscripts and its lithograph and print editions.

Let me end this section by pointing out that Afshar's editions of classical Persian texts show the highest standards of scholarship for their time. He always identified the most authoritative manuscript of the texts that he edited, collected all of its important codices, recorded all substantive variant readings of his witnesses, added fine codicological introductions, in which he described his witnesses in detail, included multiple indices and technical tables, and generally presented the text in a user-friendly and scholarly fashion. The fact that recent scholastic editions of Persian texts include such indices and bibliographies is largely thanks to the standards that Iraj Afshar established.

AFSHAR'S CONTRIBUTIONS TO FACSIMILE EDITING

Professor Afshar was, if not the first, certainly among the first native scholars who introduced facsimile editions into Iran. He believed that important Persian manuscripts, especially autograph copies or codices that were copied close to the lifetime of their authors, must be published in facsimile, if possible. He also considered manuscripts that had important linguistic, dialectological, orthographic, literary, historical, or paleographic features, good 'candidates' for facsimile reproduction. Thanks to the facsimile editions that he published, the discipline of codicology made considerable progress in Iran and the introductory essays that he included in his various facsimile editions significantly contributed to this progress. We, in the Centre for Research on the Written Heritage, published a colour facsimile edition of the oldest dated Persian manuscript, *Al-Abniya 'an Haqāiq al-Adwiya*, that was copied in 447 A.H. (1055 CE) by the poet and lexicographer Asadī of Tūs (c. 999-1072 CE), largely because Professor Afshar suggested that we should do so. Similarly, the facsimile editions of Khāqānī's *Khatm al-Gharā'ib*, and the anonymous *Tārikh-i Hirāt* were undertaken by the Centre, because of his encouragement. While serving as the editor of the journals, *Āyandeh*, *Farhang-e Irānzamīn*, and *Rāhnemā-ye Ketāb*, Afshar included facsimile editions of a number of shorter treatises in the pages of these publications. On the whole, he published some thirty important books or treatises in facsimile; for all of them he wrote scholarly introductions. Some of the most important of these are:

• در مورد این آثار هم باید تاریخ چاپ شود و هم بصورت تاریخی از قدیم به جدید مرتب شوند.

- The Deed of Trust of *Rabʿ-i Rašīdī* (1963).
- *Al-Mufid al-Khāss fi ʿIlm al-Kawāss* attributed to al-Rāzī (تاریخ چاپ شود ????)
- *Mujmal al-Tawārīkh wa al-Qisas* (2001).
- *Mujmal al-Aqwāl fi al-Hikam wa al-Amthāl* (2002).
- *Hazār Hikāyat-i Sūfiyān* (2003).
- *Hidāyat al-Mutaʿallimīn fi al-Tibb* (2008).
- *Bayād-i Tāj al-Dīn Ahmad-i Vazīr* (تاریخ چاپ شود ????)
- *Saʿdī's Būstān* (تاریخ چاپ شود ????)
- *Ferdowsi's Shāhnāma: British Library's Manuscript Add.21.103* (2005).
- Autograph copy of the *Tajziyat al-Amsār wa Tazjiyat al-Aʿsār* (2009).
- *Ferdowsi's Shāhnāma: Manuscript of the Oriental Library of the Saint-Joseph University at Beirut* (2010).

AFSHAR AND SCHOLARLY JOURNALISM

Thanks to his father's encouragement and influence, Iraj Afshar began his association with scholarly journals when he was quite young. In 1323/1945, only 19 years old, he was appointed as the office manager of the journal *Āyandeh*, which was founded and edited by his father, Dr. Mahmoud Afshar Yazdi. In 1949 he graduated with a BA from Tehran University's Faculty of Law, but did not pursue a legal career, and was appointed to direct the library of that faculty in 1950. In 1953, when he was only 27 years old, he was invited to join the important literary journal, *Mehr* as its editor. At about the same time, together with Mohammad Taqi Danishpazhuh, Abbas Zaryab, Mostafa Moqarrabi, and Manouchehr Sotoudeh, he established the periodical *Farhang-e Irānzamīn* that ceased being published in 2006 with its 30th volume. A vast number of documents, manuscripts, historical letters, deeds, and historical photographs were published in the pages of this journal, in addition to many scholarly essays and reviews. In 1954, Professor Khanlari, who was editing the journal, *Sokhan*, invited Afshar to join

him as co-editor, and a year later in 1954, Afshar was asked to help publish the literary journal, *Keltāb-hā-ye Māh*, with which he remained associated for six years.

In 1956, Professor Yarshater, who was leaving for the United States, asked Afshar to direct the Institute for Translation and Publication (*Bongāh-e Tarjomeh va Nashr-e Ketāb*), and he served in this capacity for about seven years. In 1957 Afshar helped Yarshater to establish the influential journal, *Rāhnemā-ye Ketāb* (Guide to Books), which was primarily devoted to promoting good books, good reading, and reviewing important scholarly and literary publications. Afshār served as the editor of the *Rāhnemā-ye Ketāb* until 1979, when the journal ceased publication. As soon as the *Rāhnemā-ye Ketāb* stopped its circulation, he revived his father's old journal, the *Āyandeh*, in which he essentially republished the *Rāhnemā-ye Ketāb* under a new name. The new *Āyandeh* lasted until 1993, when Afshar had to shut it down because of difficulties in finding the necessary paper for its publication. By 1993, Afshar was no longer interested in editing any new journals. Instead, he increased his contributions to various scholarly periodicals, both in Iran and in the United States. He regularly contributed a very popular section entitled *Tāzeh-hā va Pāreh-hā-ye Irānšenāsī* (Tidbits of Iranian Studies) to the journal, *Kelk*, that was published under the editorship of Ali Dehbashi. When that journal changed hands, he stayed with Dehbashi's new journal, *Bukhārā*, to which he continued to send his "Tidbits." The entire collection of Afshar's "Tidbits" has been collected in one volume and is scheduled to appear in Iran in the near future.

In 1962, along with Professor Daneshpazhuh, Afshar established the Journal of Manuscript Studies, that was associated with the Central Library of Tehran University, and in 1965, founded the Journal of Librarianship for the same library. He further published the first annual bibliography of Persian books, which was published under the auspices of Iran's Book Society (1333-1345/1955-1967). One of Afshar's most important contributions to Iranian scholarship was the publication of his *Index Iranicus*, a massive bibliography of Persian articles on Iranian studies. The first volume of *Index Iranicus* was published in 1961, and its 7th volume, covering Persian articles that were published between the years 1907 and 2005, appeared in 2011 shortly following their

founder's death. Volumes eight and nine of the series that were partly prepared under Afshar's own supervision, are scheduled for publication in the near future.

MANUSCRIPT CATALOGUING

Throughout his life, Iraj Afshar described thousands of manuscripts and composed several catalogues for Iranian and foreign libraries, museums and private collections. Together with his friend and colleague, Mohammad Danehpazhuh, he travelled to the four corners of the world between 1961 and 1984, inspected thousands of codices, and described some fifty thousand of them in his various manuscript catalogues. In all, Iraj Afshar published some forty volumes of bibliographies and manuscript catalogues. With Professor Daneshpazhuh, he founded the Journal of Manuscript Studies of Tehran University's Central Library (1962-1979) in which thousands of codices were described. Along with Professor Anwar in the National Library, he designed special forms to describe manuscripts that were waiting to be catalogued (1963), wrote the catalogue of Harvard University's Persian books (1964), and prepared the catalogue of the Austrian National Library in Vienna (1996). In 2002, Afshar established a monographic series called *Daftar-e Tarikh* that was supported by the Afshar Foundation, and was devoted to the publication of brief treatises and individual documents, often accompanied with the documents' photographs.

AFSHAR AS ADMINISTRATOR AND LIBRARIAN

Following his graduation from Tehran University's Faculty of Law, Afshar decided not to pursue graduate work. In spite of this, his noticeable talent and competence brought him to the attention of the university administration that put him in charge of the library of the Faculty of Law at Tehran University. This marks the beginning of his love affair with librarianship, a love affair that lasted for the rest of his productive life.

In 1957, Afshar travelled to France, where he attended a one-year UNESCO programme of training in librarianship. He then returned to Iran and began to teach library science at Tehran's Teachers' College in

1958. Soon, he was appointed to the directorship of that college's library, a post that he assumed in 1961. In 1962, he was put in charge of the National Library where he began the project of cataloguing that library's collection of manuscripts with the help of Professor Abdollah Anwar. However, after seven months of service, he resigned his post for personal reasons. In 1966 he moved on to the directorship of the University of Tehran's Central Library and Documentation Centre. In his new post, Afshar arranged the purchase of microfilms and photographs of a vast number of manuscripts from different libraries and museums in Turkey and the subcontinent. He thus, created a collection that has proven indispensable for the researches of many scholars of classical Persian and Arabic literature. He remained at this post for thirteen years. His remarkable managerial abilities were recognised by the university's administration and he was put in charge of the university's library press concurrently.

In 1970 he was appointed to the directorship of the National Centre for the Book, which was an organisation associated with UNESCO. He became a Professor of historical documents and local histories at the department of history of Tehran University in 1357/1979. Afshar retired from teaching after the Islamic revolution. However, he continued to co-operate with a number of scholarly establishments. Among these, one may mention the Afshar Foundation, the board of directors of the National Library, the University of Tehran's Central Library, Centre for the Great Islamic Encyclopedia, *Nāmeḥ-ye Bahārestān*, *Āyene-ye Mirās*, and many others. He will be sorely missed not only by the scholarly community of his country, but also by those who are involved in Iranian Studies throughout the world.

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NOTES

¹ Some of the *Awrād al-Ahbāb* is adopted from Abū al-Najīb al-Suhrawardī's *Ādāb al-Murīdayn*, and the two texts show other significant similarities. However, unlike the *Awrād al-Ahbāb*, which is composed in Persian, the *Ādāb al-Murīdayn* is in Arabic. Furthermore, the sociological information that is contained in the *Awrād al-Ahbāb* is more detailed than what is found in the *Ādāb al-Murīdayn* and its various translations.

² For instance, '*Atibat al-Katiba* of 'Alī ibn Ahmad Muntajab al-Dīn-i Badī' that was edited and published by Ahmad Bahmanyār (Tehran, 1315/1937), *al-Tawassul ilā al-Tarassul* by Muhammad ibn Mu'ayyad al-Baghdādī, edited by Muhammad Qazvini and 'Abbas Iqbāl (Tehran, 1329/1950), and many others.

³ Professor Mudarres Razavi's edition of the *Tansūkh-nāma-yi Ilkhānī* appeared three years later in 1348/1970.

Iraj Afshar's Style of Cataloguing

With a Glance at the Austrian National Library's Catalogue of Manuscripts

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IRAJ AFSHAR'S FIRST CATALOGUING

PROFESSOR IRAJ AFSHAR, born in 1925, started his first cataloguing in 1960 when he was 35 years of age, that is once he had accumulated valuable experience in writing, gained through publication of numerous articles, the editing of manuscripts, the writing of introductions and having worked as an editor-in-chief.¹

However this aside, Afshar's first output as a cataloguer is perhaps a much earlier compilation in the form of *Ayandeh* magazine's first catalogue of annual contents completed in 1945 at the tender age of just 20² years. This project highlighted his talent and developed his interest in the world of cataloguing, a motive which came to be crystallised in his later production of catalogues for varying manuscripts.

Ashfar's professional career as cataloguer owes a great debt to the world of librarianship and the significance of the skills and training he developed cannot be underestimated. It was his entrance to the library of Tehran University's Law College, encouraged and supervised by Dr. Mohsen Saba and Prof. Muhammad-Taqi Daneshpazhuh, that paved the way for this, and this continued until 1960. Afshar turned to cataloguing and from 1960 to 1979, he not only established the journal of manuscripts in Tehran University's Central Library and Documentation Centre (with the co-operation of Prof. Daneshpazhuh), but also

undertook the management of the journal publishing 8 volumes during these years.

This journal, nevertheless, is perhaps not the best illustration of Afshar's cataloguing abilities because of its nature being a cataloguing-like work. His presidency of the National Library in 1962 lasted only 7 months and the cataloguing work was actually left with Prof. Abdullah Anwar.³ Some of Afshar's writings in Tehran University's journal of manuscripts, were published between 1962 to 1965,⁴ but his first independent cataloguing compilation should be known as Harvard University's catalogue of Persian books which lasted 7 months from 1963.⁵

From 1974 to 2001, he published a catalogue of the Malek National Library's manuscripts, and in 1995 a catalogue of Persian manuscripts held at the *Austrian National Library* (Vienna).⁶

Since then and until his death in 2011 Afshar remained a significant figure mostly in the fields of Iranology, edition, and the writing of introductions and notes. He did little or no further work on cataloguing manuscripts other than producing some short introductions on certain catalogues of manuscripts.⁷

IRAJ AFSHAR'S FIRST MANUSCRIPT CATALOGUE

According to Afshar's statement in the textology of the catalogues of Persian manuscripts in world libraries (Tehran University Publications, No. 485, 1958, by the efforts of Iraj Afshar), he introduces only one catalogue from himself as: *Afshar, Iraj, The Catalogue of Manuscripts of the Finance Ministry Library, "Farhang-e Iran Zamin", First Chapter, 6th Vol., Tehran, 1958, pp. 5-38*. In this catalogue, 8 volumes of the collection belonging to the library of Muhammad-Hassan Sani' al-Duwlah consisting of 117 treatises and books, are introduced and described.

As Afshar has not registered any work with regards to introducing foreign libraries, this catalogue can be considered as Afshar's first catalogue of manuscripts.

In actual fact, Afshar's work, with regards to the publication of the central library of Tehran University's manuscripts cannot be considered as representative of his cataloguing work, but more a sample of his efforts to pinpoint the necessity of recognising the Islamic heritage in the

world. For example in the fifth volume of Tehran University (1967) we see different catalogues introduced for the sake of the collections, such as Iraj Afshar, Mahi Velaei, Ahmad Golchin Mo'afi, Muhammad Taqi Daneshpazhuh, Kazem Modi-Shanehchi, Taqi Binesh, Haj Sayyid Ali-Asghar Asgharzadeh, ... among whom the names of Afshar and Daneshpazhuh are glowing.

For example, Afshar writes on p. 111: "In the 34 manuscripts seen in different personal collections, they are introduced while thanking the owners for their permission. Then 13 manuscripts by Mr. Thameni and only 4 manuscripts by Mr. Ibrahim Dehqan and one manuscript by Mr. Baqerzadeh and 4 manuscripts by Muaven al-Dulah are narrated."

It means that everything even briefly has been narrated; and whilst the Dehqan library is a great one, Mr. Hazrati has catalogued it in 2 volumes. This very brief information gathered during foreign travels, regarding persian manuscripts, has been mentioned by Afshar. Most of the manuscripts in foreign libraries introduced in the fifth volume are persian manuscripts: *Jerusalem Academic and National Library*, *Paris National Library*, *Royal Asiatic Society of London (Ellis Collection)*, *Otrikht University*, *Scotland Natinal Library*, *Royal Kopenhak*.

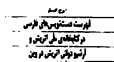
WHY IS AFSHAR'S STYLE OF CATALOGUING IMPORTANT?

Why is Afshar' style of cataloguing so important for us to understand? This is a valid question. And what role can his development of cataloguing have with regard to offering practical and scientific solutions for present day cataloguers? In answer to this, it can be said that one of the most important challenges facing the cataloguing of manuscripts is the issue of "standardisation".

There is no consensus between old and modern cataloguers. The latter still follow the same traditional ways aside from a few differences. It was interest in ancient works which led some members of the Islamic seminary, as well as talented young university students, to turn to the field of cataloguing.

Afshar's style was a highly professional and accurate one, marked by high quality recording. He had passed his librarianship course in a scientific way meaning that his approach towards manuscripts was governed

by scientific principles and standardisation, elements vital in bibliography and the field of books. It is for this reason that Sayyid Farid Qasemi, while admiring Afshar, introduces him as the "Knowledgeable cataloguer".⁸



Afshar was also associated with UNESCO in Europe, passing the librarianship educational-experiential there from 1956 to 1958.⁹ He published a book entitled "Textology of the Catalogues of Persian Manuscripts" by Tehran University.¹⁰ In the same year, he published another book entitled "Textology of Persian Manuscripts Catalogues in World Libraries".¹¹ In 1964 and when the "FIPA cataloguing" had no place in Iran, he started FIPA for Tehran University Publications.¹²

To study the change and development in Afshar's cataloguing work, it is necessary to investigate the standard on the basis of which Professor Abdullah Anwar catalogued the National Library, as this standard was the result of the experience of a scientific group which included Afshar. Afshar narrates the case as follows: "In 1963 and for cataloguing the National Library, some meetings were held in the presence of certain grand scholars, Mujtaba Minavi, Muhammad-Taqi Daneshpazhuh, Abbas Zariab, Muhammad Amin Riyahi and Abdullah Anwar; and according to their viewpoints, the work sample standard was prepared and fortunately on the same basis, the catalogue of that library was printed by the praiseworthy efforts of Abdullah Anwar." That "sample work" was also published in *Rahmay-e Kitab* and *Yaghma* journals.¹³

After forty years, Afshar introduced a new fiche system while emphasising his previous experiences stating: "Previous experiences especially what was necessary for cataloguing the Persian manuscripts of the Vienna National Library caused me to provide an extensive work sample and then set the catalogue of that library on the same basis".¹⁴

Afshar quoted the history of the questionnaire concerning the fiches of manuscripts belonging to the Austrian National Library:¹⁵

I worked on such a questionnaire in 1962 when I directed the Iranian National Library, for the purpose of cataloguing the manuscripts of that institution and I invited the late Mujtaba Minavi, Muhammad-Taqi Daneshpazhuh, Dr. Asghar Mahdavi, Dr. Muhammad-Amin Riyahi and Abdullah Anvar to use this questionnaire in preparing the catalogue of the library which was then published by Abdullah Anvar. Under the title "Cataloguing of Manuscripts" the questionnaire was published in the *Review Ranamaye Kitab*, 5 (1962), pp. 543-546.¹⁶

It seems that the general order in this catalogue, as referred to by Afshar, is the same first questionnaire and what he has added has been stated (in the Austrian Catalogue, English introduction, p. 12; and Persian introduction, p. 14) as:

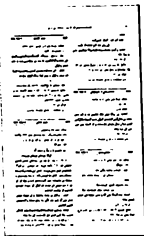
In 1997 I started my work and during three successive stays in the Department of Manuscripts of the Austrian National Library I took notes concerning the codicological criteria of the manuscripts including the scripts, calligraphies, decorations and illuminations and the bookbindings as well as the texts. I used a questionnaire which was elaborated and adapted since 1962 at the National Library in Tehran.¹⁷

Of course, the references which have been used by Afshar are not mentioned in the Persian introduction and it has been acknowledged that it has been equiponderated with other references and catalogues; but in the English introduction, other references have been mentioned and states:¹⁸ "Models by Gustav. Flugel and by Helene Loebenstein used in the catalogue of the Arabian manuscripts in the Austrian National Library which was published in 1970." So what has taken place in this catalogue is as follows:

Equalisation: Addition of whats missing, while referring to other references like Daneshpazhuh's writings and the Flogol catalogue.

Subject order: The method used in the catalogue is in two parts of textology and bibliography, as declared by Afshar.¹⁹

To explain Afshar's cataloguing style, his own explanation should be heard too, which shows full harmony of the contents of the catalogue indicating that his catalogue is considered to be one of the most scientific and precise catalogues existing among other contemporary catalogues.



POINTS FOR FURTHER CONSIDERATION

The descriptions given by Afshar regarding the points of textology and bibliography are important as follows:

(a) Textology

1. The title of the work, the catalogue-number and the shelf-mark of the manuscript "Mixt". The texts in Persian cover in the numeration of the Vienna oriental manuscripts the numbers 2930-3239. To find a certain manuscript first consultation of the list of the shelf-marks referring to the catalogue-numbers is necessary.

2. Information on the text. The first paragraph is devoted to the name of the author, followed by some biographical notes and the date of death.

3. The date and the occasion of compiling the text.

4. The bibliography and the description of the work and its subject, detailed notes on the table of contents, sections and chapters of the manuscripts, in respect of the copy not yet mentioned in other catalogues.

(b) Codicology

7. The colophon of the manuscript is given with its text. The quotations are presented objectively, to avoid any distortions, even in the calligraphy or edition, with the aim of revealing the method of regarding the metric system.

8. The numbers of folios and lines, the size, the size of the manuscript and of the written space, also regarding the metric system.

9. The script, the copyist, and also the date and the place of copying.

10. The particularities of the paper, followed by a description of the bookbinding.

12. Supplementary notes on the manuscript.

13. The possessors of the manuscript. The text of the seal.

14. The sources. (1) Bibliography, (2) prints copies, (3) other sources, (4) references to D. Duda and K. Holter.

15. The description of a collection and its different texts.

16. Common codicological information on a collection. The codicological specifics of a part of a collection are given in their proper place.²⁰



In the explanations of textology, some cases have been mentioned in detail i.e.:

- *Aqanim al-ajam* (Cat. MANL, p. 23)
- *Ilahi Nameh* (Cat. MANL, p. 79)
- *Uwraq Majlesdar Shahnameh* (Cat. MANL, p. 131)
- *Arqam Wa Namehaye Safavi* (Cat. MANL, p. 119)
- *Tuhfah al-Ushshaq* (Cat. MANL, p. 58)
- *Tazkerah Naqshbandi* (Cat. MANL, p. 58)

But mention has not been made of textology or some short explanations are given, i.e.:

- *Conjugation of Persian verbs* (Cat. MANL, p. 25) has no textology

- or the *Persian and Arabic words in Turkish* have no textology
- and or *Twelve Hadith* (Cat. MANL, p. 47) has no textology

Although there is no textology in some cases, there are some incipits mentioned to the extent that this makes up the shortcoming in textology; for example, *Haqq al-Yaqin Fi Marifah Rabb al-Alamin* by Shabestari (Cat. MANL, p. 46) has no textology but eight *Babs* have been mentioned while stating the incipit.

It should be noted that while cataloguers do not avoid mentioning textology in the well-known manuscripts, it seems Afshar has also neglected or paid little attention to the well-known manuscripts or those whose subjects were not important in his view.

I believe that most cataloguers have interfered in works in terms of projecting their own personal interests and studies. For example, a cataloguer professional in his own literature, may work mostly on literary manuscripts trying hard to introduce them by giving them much more description; and if he does not like any other book, may introduce it

unfavourably. This issue is more clearly apparent where books of belief are concerned. Those works which are written against the cataloguer's faith and belief, have been introduced briefly. We do not wish to point to real cases of this kind as a reader of catalogues would recognise them, but what must be stated is that these personal interests are seen in Afshar's catalogues and he is no exception in this case. As evidence see some examples below:

• *Tazkerah al-Uwlia'*: in the field of the Gnostics and mysticism (Cat. MANL, p. 58).

• *Wajebat-e Mazhab-e Imamiyyah*: in three Bab (Cat. MANL, p. 54).

• *Wajizah Dar Inha-e Siyagh-e Uqoud-e Nikah*: regarding the Siyagh Al-Uqoud of marriage (Cat. MANL, p. 54).

• *Zardast Afshar*: one of Zoroasters beliefs. The original text is written by Ki-Khosro Esfandiyar one of the followers of Azar Keyvan.

This is while in his catalogue he has referred to some books in detail and explained the reason for this longevity. For example, in explaining *Ayin-e Akbari* in Cat. MANL, pp. 273-275, he states: "To introduce the contents of this important book and as its catalogue of contents has not been published anywhere, I bring the worked out catalogue: *Ayin-e Honarabadi*, *Ayin-e Kharidan-e Abad-Manzel*, *Ayin-e Khazan-e Jawahir*, etc.

Or in description of *Taqwim-e Qamar (Zij)*, Cat. MANL, pp. 27-8, he states: "As the introduction of this work is important for the history of maths, all of it is mentioned here".

In all fairness when we see Ashfar giving a detailed description for a work, we should consider this additional information as useful and necessary. The problem, however, lies in books which are not given this treatment. Afshar's reasoning in this case being either that further description was not necessary, or the book did not warrant it, or there were other catalogues containing reference to the book.

Advantages of Afshar's Catalogue

1. Presenting the collections in two sections: first subject-alphabetical and then in collections. It should be explained that cataloguing collections of manuscripts is hard and time-consuming. When there is

one book then the cataloguer can describe it easily; but when there are collections of books, it is hard to describe them as the expert cataloguer describes both the titles of the books and treatises and also the relationship between one treatise and another.

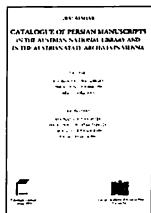
Most of the published catalogues in Iran are in alphabetical order of library or subject. In catalogues where the order of manuscripts is the criterion for introducing the manuscripts such as in the Ayatollah Marashi Library or the Islamic parliamentary library in Tehran, the descriptions of all treatises are mostly mentioned first when explaining the collections and then the textology descriptions are presented separately. The treatises are also introduced more or less according to the cataloguers' patience and care.

In catalogues arranged in terms of subject order, for example Astan Quds Razawi, there is inevitably separation between the collections as many of the collections of manuscripts have treatises with multi-subjects. The first treatise is about medicine, the second regarding astronomy and the third turns to philosophy etc.

In this kind of introduction some "Relations among the Manuscripts" are missed and we are sometimes left with interesting results concerning the arrangement of various subjects beside each other. To review the copyists' thought process and to know the motives for arranging many numerous books in one collection, the information of one manuscript available in one place can be important.

Afshar has paid attention to these points and he had an applicable and scientific approach to the collections. In his catalogue, which has a subject basis with every subject arranged in alphabetical order, he explains the books of one collection separately but the reader can easily recognise that the book belongs to a particular collection naturally when he sees Afshar's explanation (i.e. other specifications have come in introducing the collection).

Then the collections have been turned in the eighth part (Austrian Catalogue, pp. 139-150) which is the last part of the book and the logic relationship between the treatises has been also stated.



2. The catalogue indexes which were done by Rahimi Risseh include 9 catalogues: (titles, authors, subjects, copyists, scripts, dates of copying, places of copying, possessors and the seals in the manuscripts). The indexes are followed by the list of shelf marks, the list of transliterations, the list of titles and the list of the figures.

3. Using abbreviations (like = جلد = ج i.e., V. = volume; برگ = گ i.e., F= folks).

4. Inserting photos of the selected manuscripts (74 photos from the Austrian National Library and 20 photos from the Austrian State Archives).

5. Detailed incipits and explicits. It should be boldly stated that the extent of the incipit and explicit of a manuscript mentioned in a catalogue follows special mental rulings that an experienced cataloguer can fulfil and so it cannot be said that there is a standard for writing an incipit or explicit. Rather this should be done in such a skilful way that a reader can take the most advantage by looking at the catalogue without referring to the manuscript. The incipits and explicits can be various. Sometimes the compiler may mention his goal and purpose of writing the book in the first lines or he may give a historical description.

Afshar has considered this point and he has sometimes just mentioned a half line of an incipit and sometimes 16 lines. He is not just filling the pages of the catalogue as he has avoided whatever has been unnecessary like the book *Raml Balegh Thamareh* introduced on page 40 or the book *Kanz al-Yawaqit* mentioned on the same page.

The explicits of the books are commonly done more briefly. Ashfar has tried to mention some of the phrases which show the general concept to the last word by which the compiler ends his book. To do this, the number of explicit words should vary, which has taken place in Afshar's catalogue.

6. Emphasis on Colophons: Afshar has had much emphasis on producing colophons during the meetings. Colophons show the role of copyists as the book shows the compiler's role. As we have less information about copyists and most of them were among the scholars and scientists of their own time, so the study of explicits can give us good information about them like the exact geographical names, the way of changing from proper names, the way of declaring history etc. Afshar

has stated this in his catalogue in a good manner. He mentions the explicit in any number of words, although he deletes some words from the middle like the colophon of p. 42, Manuscript *Haft Jowhar*; or the colophon of p. 37, Manuscript *Lezzat al-Nisa*.

When the phrases of the explicit are short or without the historical information, they have not been neglected by Prof. Afshar like the explicit of manuscript *Ikhtiyarat Badi'i* (p. 30) as: تمت بعون الله و توفيقه or manuscript *Khawass-e Chehel Esm-e A'zam*, p. 46 as: تمت م م م

Of course, it is worth mentioning colophons because they both indicate the border between the compiler's words and the copyist and also explicitly show that the manuscript has no reference to the compilation date or the copyist name or other information like this.²¹

7. Considering the newly discovered manuscripts (unique, ancient, pictorial, historical etc.) those manuscripts whose previous owners were orientalists or they have mentioned Austrian kings or the history of Austria and Iran relations have not been neglected by Afshar's description.

8. Among the advantages of this catalogue, is that it can be referred to the textology discussions especially the physical specifications of the book which have not been paid attention to in other catalogues; for example, the description on p. 86 in the catalogue on the book *Khatm al-Gharaib* is wonderful; or his description concerning the decorations of *Jam-e Jahan Nima* (ALV, p. 45) as:

درگ ۱ ر شکلی دایره دار با عنوان ، همچنین درگ ۱ پ - ۲ دایره توحید، و درگ ۲ پ دو دایره مربوط به حقیقت، درگ ۳ داخل مثلث ظریفی به طلا نوشته شده سرلوح (گ، پ) مربع مستطیل است و مذهب. مجدول سه خطه به سیاهی و طلا

9. The separation between the length and width of the book and text is another advantage of the book. In catalogues of manuscripts, cataloguers used to mention the length and width of the pages, but Afshar like some other learned cataloguers, refers to the length and width of the text too.

10. Consideration of resources for references is another advantage of his work. It is worth mentioning that he does not stop at textology resources but makes links to the resources which are compatible and related to the manuscript.

Afshar believed greatly in the "Style". In the introduction of his valuable book *Catalogue of Persian Articles* whose publication has been delayed for some years (p. 4, 1961; First Vol.; Tehran University) he states: "Perhaps it was fate that the precious book "Indian Islamicus" to be published and I use and follow my work according to its classification. This work, as one of the main resources in the discussion of Iranology, persuaded me to finish my left book."²²



Professor Iraj Afshar at a Summer School on Persian Codicology, Vienna, September 24, 2008 (Austrian Academy of Sciences)



Professor Iraj Afshar, Austrian Academy of Sciences, Vienna, September 22, 2008 (by S. S. Ashkevari)

NOTES

¹ Regarding his journalistic activities reference can be made to: Internal manager of *Ayandeh* magazine in 1946, editor-in-chief of *Mehr* magazine in 1952-53, founder of the *Farhang-e Iran-zamin* Journal in 1952 and its manager from 1953 to 2005, Chief editor of *Sokhan* magazine in 1954-1956. Regarding articles, his main and serious works started at the age of 20 while working on the publications of *A'ain* and

Khavarzamin and continued in the following years in the form of co-operation with magazines: *Jahan-e Nou*, *Khandaniha*, *Qiyam-e Iran*, *Yaghma*, *Sharq-e Miyaneh*, *Salnameh Keshvar-e Iran*, *Ettelaate Mahaneh*, *Shahr-e Rey*, *Mehr-e Iran*, *Danesh*, *Nemayeshgah* etc. He started compilation of books in 1951 by writing the book *Nasr-e Farsi Moaser*. In the next year, he published the following books: *Maqalat Wa Sokhana-e Abu Saeid Abu al-Khair*; and *Qandiyyeh, Maddah al-Hayat* in 1953. The book *Yaddashthaye Qazivini* was published in 1975 and the book *Ferdows al-Morshediyyah* in 1954. (See *Ketabvarz-e Ettelaesan*, pp. 13-18).

² *Ketabvarz-e Ettelaesan*, p. 14.

³ *Ketabvarz-e Ettelaesan*, pp. 19-21.

⁴ *Ketabvarz-e Ettelaesan*, p. 19.

⁵ *Ketabvarz-e Ettelaesan*, p. 19.

⁶ *Ketabvarz-e Ettelaesan*, p. 38.

⁷ *Ketabvarz-e Ettelaesan*, pp. 39-50.

⁸ *Ketabvarz-e Ettelaesan*, p. 211.

⁹ *Ketabvarz-e Ettelaesan*, p. 16.

¹⁰ A version of this book is available in the Specialised Library of History, Qom.

¹¹ A version of this catalogue is available in the Specialised Library of History, Qom.

¹² *Ketabvarz-e Ettelaesan*, p. 20.

¹³ RahimiRisseh, Ahmad Reza, Manuscript and Cataloguing in Iran, p. 110, the article "About the Design of Fiche" by Prof. Afshar, narrated from *Bukhara*, No. 33-34, Azar and Esfand 1382 A.H., pp. 61-63.

¹⁴ The same.

¹⁵ Catalogue of Persian Manuscripts in the Austrian National Library and in the Austrian State Archives in Vienna (Cat. MANL), English intro., p. 12; and Persian intro., p. 14.

¹⁶ Catalogue of Persian Manuscripts in the Austrian National Library and in the Austrian State Archives in Vienna (Cat. MANL), English intro., p. 12; and Persian intro., p. 14.

¹⁷ Catalogue of Persian Manuscripts in the Austrian National Library and in the Austrian State Archives in Vienna (Cat. MANL), English intro., p. 12; and Persian intro., p. 14.

¹⁸ Catalogue of Persian Manuscripts in the Austrian National Library and in the Austrian State Archives in Vienna (Cat. MANL), English intro., p. 12; and Persian intro., p. 14.

¹⁹ Catalogue of Persian Manuscripts in the Austrian National Library and in the Austrian State Archives in Vienna (Cat. MANL), English intro., pp. 13-14; and Persian intro., pp. 15-16.

²⁰ Catalogue of Persian Manuscripts in the Austrian National Library and in the Austrian State Archives in Vienna (Cat. MANL), English intro., pp. 13-14; and Persian intro., pp. 15-16.

²¹ Of course it is sometimes difficult to recognize the "border of explicit and collophone" like the manuscript of *Jam-e Jahan Nima*, p. 45 whose explicit is as:

و بر همین اختصار کنیم که وقت عزیز است ... والله اعلم بحقائق الامور. تمت
الرسالة و حسن توفيقه. م.

It is difficult to recognise if the phrase تمت الرسالة و حسن توفيقه is by the compiler or the copyist. Prof. Afshar has mentoned this in the explicit and believed it is by the compiler but it is unlikely to be by the copyist, especially the single-word م at the end which is one of the secrets of the copyists who added them at the end of manuscripts for decoration.

It should be said that it is sometimes not difficult to recognise the explicit and collophone and it seems that Prof. Afshar has neglected this. The manuscript "Asrar-e al-Hurouf" introduced on ALV, p. 43, is of this kind. The explicit phrase is as:

بعد از ادای خفتن ۴۰۱ بار بخواند...، والله اعلم. تم و کمل

It means the cataloguer has not considered any phrase for collophone while it seems the last phrase (i.e., تم و کمل) is a description by the copyist and not the compiler.

²² The courtesy and gratitude of Prof. Afshar should always be considered as he explicitly refers to the style of other books if he has used them or he mentions other sources if he has seen them. In the Vienna catalogue, he refers to taking advantage of the knowledge of Prof. Daneshpazhuh.

Iraj Afshar and the Historiography of Yazd

CHARLES MELVILLE
(University of Cambridge)

I WOULD LIKE TO START with a moment of personal reminiscence, concerning our dedicatee. I first met Iraj Afshar in Tehran in the spring of 1974, on my first visit to Iran as a very junior researcher, fresh from an M.A. course at SOAS, while he was the rather intimidating Head of Tehran University Library. I saw him for the last time at his house in Tehran in the spring of 2010, on my penultimate visit to Iran, when he was as welcoming and full of information as ever. During this long period of intermittent contacts and visits, Iraj Afshar was consistently generous with references, books and scholarship, kind and humorous. At the Safavid round table in Cambridge in 1993, he quite unexpectedly stood up towards the end of dinner in Pembroke College and produced a lively and amusing account of the conference, referring to all the speakers and their topics in a light-hearted and sometimes satirical manner.¹



A recent issue of the journal *Bukhara*, put together by 'Ali Dehbashi and devoted to the life, works and memory of Iraj Afshar, contains a short (and to my mind not entirely elegant) elegy, entitled 'A Man from Yazd', ending with the couplet:

| | |
|-------------------------------------|--------------------------|
| هر که یزدی است تا که یزد به پاس است | در مقام سہاس و شکر رواست |
| برزیان آورد کند تکرار | نام جاوید ایرج افشار |

It is right for any Yazdi, as long as Yazd remains, to repeat with praise and thanks Iraj Afshar's immortal name.²

The same issue has a section on Iraj Afshar and historiography,³ which focuses almost entirely on Afshar's contributions to the history of modern Iran (19th century onwards and particularly the Constitutional period) and his engagement with figures such as Hasan Taqizadeh and Mosaddegh. Indeed, in one of his own writings on historiography, Afshar shows himself to be chiefly concerned with the transition from traditional historical writing and the advent of modern 'scientific' methods adopted largely from the example of European scholarship, discussing the work of Mohammad 'Ali Forughi, Ahmad Kasravi, 'Abbas Eqbal, Sa'id Nafisi and others.⁴ He is concerned here chiefly with the use of sources, the proper referencing of information, and embracing the tools of sociology and ancillary subjects like numismatics and archaeology. He ends by noting that the

increase today in the publication of documents, such as endowment deeds, sale and purchase contracts, marriage contracts, government orders and tax exemptions provides in itself a basic and effective help towards the advancement of historiography.⁵

As we all know, Iraj Afshar played a prodigious role in this, hardly an issue of a Persian scholarly journal appearing without the publication of some official document, or set of letters and telegrams.⁶ His attitude to the historians of the past, that is, the traditional chroniclers, by contrast, is rather disparaging:

Every historian... wrote history as he saw it on the basis of the few sources available ... without using any other method or arrangement. [With a few exceptions], we do not find any important or considerable difference in the style of history writing which would enable us to differentiate between them. [...] Their authors, following the customary way of their time and moved by fear and obedience, wrote these books according to the wishes of the person who commissioned them.⁷

He goes on to say that earlier historians were not unaware of their

own defects and takes Sharaf al-Din 'Ali Yazdi, author of the *Zafarnama* as an example, who wrote

in flattering and poetic language in honour of [Amir Timur] and considered three reasons for preferring his work to earlier history books: One of the advantages is making known unusual situations, surprising events and political upheavals (*engelabat*)..., the mental enjoyment of which was a truthful mirror for men of wisdom and perception; secondly, explaining particularities and happenings and reporting them in detail; and the third excellence is truthful description and [revealing] the rightness and correctness of the stories and narratives.

"Naturally", comments Afshar, "any ordinary reader with a critical sense will find that the whole book does not possess qualities of accuracy, truth and honesty."⁸

We will return to 'Ali Yazdi in a moment; it remains to note first that Afshar mentions that in the more remote past (i.e. before the Qajar period) the history of local dynasties and of the cities had been an important part of the historians' work. Among these he singles out "scores of other books on Yazd" and notes that over 100 books about the cities have been published in the last 70 years [at the time of writing], generally less reliable and systematic than those concerning the dynasties.⁹

So much, then, for Iraj Afshar's most readily accessible views on Persian historical literature, with its interest focused on the writing of Iran's history by modern Iranian historians, alongside a rather dismissive view of the quality of the chroniclers of older times, and a brief recognition of the popularity of local histories within the corpus of Persian historiography.

HISTORIANS FROM YAZD: DYNASTIC CHRONICLES

It is through the lens of local history, and the output of local historians, specifically from Yazd, that I would like to explore an important element of Iraj Afshar's contribution to Persian historiographical studies. Indeed, for a mediaevalist, I would say that his contribution in this field was no less fundamental than the work he did on the more modern period. Above all, his attachment to the history of his native city provided a

very fruitful focus for his work. His own publication, *Yadgar-ha-ye Yazd*,¹⁰ describing the built environment and historical monuments of the city, starts with a list of the available sources, which include several local histories, from the 15th-century *Tarikh-e Yazd* by Ja'far b. Mohamamd Ja'fari (author also of the still unpublished *Tarikh-e Kabir* to 850/1447)¹¹ and the *Tarikh-e Jadid-e Yazd* of Ahmad b. Hosain, to the 17th-century *Jame'-e Mofidi* of Mohammad Mofid Bafqi, and the 19th-century *Jame'-e Ja'fari* by Mohammad Ja'far Na'ini ("Tarab").¹² All four texts were edited by Iraj Afshar himself, along with comments on their value and originality, which we will turn to shortly. First, we will take a look at some of the more general historical writing composed by Yazdi authors.

The city of Yazd, with its nickname *Dar al-'ebada* or "Home of Worship" has a strong tradition of historical literature, as many previous scholars have noticed, not least the late Professor A.K.S. Lambton,¹³ Isabel Miller,¹⁴ and more recently Beatrice Forbes Manz.¹⁵ This tradition embraces not only works relating specifically to Yazd itself, but authors native to Yazd writing the history of Iran more generally.¹⁶ Before coming to a brief survey of these authors and their works, it is necessary to consider why Yazd generated such a strong tradition of historical writing, especially at particular periods.

As in other cases, the first impetus for local historiography is a product of the large extent of Iranian territory and the distance between major cities. This separation or possibly even sense of isolation engenders a spirit of independence, which is in fact very often made a political reality by the difficulty of any one power centre controlling Iran's far-flung regions. Thus periods of imperial rule alternate with fragmentation and the rise of local hegemonies. On occasion, these regional powers could control quite extensive territories and turn their political centres into more or less ephemeral capital cities, with the accompanying urban development and public buildings that left a permanent memorial of their rule.

In the case of Yazd, a true desert city with a harsh dry climate not conducive to agriculture or a comfortable life, the need to bring water from afar and find the means to make life tolerable saw the development of a distinctive vernacular architecture (ice houses, water cisterns, wind

towers and qanats, for instance),¹⁷ and with it perhaps a greater spirit of self-reliance and resilience. Yazd is also well-placed as a vital centre in the network of trade routes skirting the southern margins of the kavir. The city did not reach real political prominence until the Seljuk period (late 11th century AD), when the Kakuyid family were governors, and patrons of several buildings (including a Friday mosque and the city wall), though their rule did not stimulate local history; nor did that of the so-called Atabeks of Yazd who followed them, from the late 11th century to c. 718/1318.¹⁸ In general, most historical literature was still written in Arabic until the Mongol invasions, and the history of the eastern provinces was still documented from the perspective of the caliphate in Iraq. This was followed by the imperial gaze of Ilkhanid Tabriz (where Rashid al-Din nevertheless held considerable interests in Yazd), and concerted efforts on the part of wealthy local families, far from the centres of elite court patronage, to revive cultural and religious life in southern Iran in the face of the economic and psychological damage caused by the Mongol invasions.¹⁹

It is no accident that the first provincial regime to command attention on a larger stage, with the concomitant development of the city and a historian to match, was that of the Mozaffarids, who rose to prominence in the final years of the Ilkhanate.²⁰ Their first historian was Mo'in al-Din Mo'allem Yazdi, whose *Movaheb-e elahiyya* of 767/1366 is a work of highly complex rhetoric, in the strain of Jovaini, Vassaf and 'Otbi. All these three earlier historians were also writing either about dynasties or individual rulers – as recognised by the later historian, Fazl-Allah Khonji-Esfahani, who also included Sharaf al-Din 'Ali Yazdi in this group.²¹ Fazl-Allah mentions that Mo'in al-Din spoke of the Mozaffarids with “great felicity of expression”

(در سلاست عبارت و جزالت معانی و حسن استعار دیوان بلغا را در نوشته است)

– but to such incomprehensible effect that Mahmud Kotbi, himself a former employee of the dynasty, felt compelled to rewrite their history in a more accessible manner, for “the face of the bride of his [Mo'in al-Din's] intentions remained behind a veil of concealment and inhibition”:²²

مولانا افضل سعبد مغفور مولانا معين المله والدين يزدی رحمه الله عليه بعضی از تاریخ ایشان تالیف قوموده بواسطه استعارات غریبه و عبارات عجیبه و الطرا در مدایح ایشان و اغراق در اوصاف هر یک از آنان چهره عروس مقصود در تنقح احتجاب و امتناع مانده.

The Mozaffarid dynasty, originally from Maibod, but latterly contesting control of the whole of southern Iran including Shiraz, Yazd and Kerman, was finally exterminated in Timur's campaign of 795/1393. An order issuing from Timur's entourage in Yazd encouraged another former servant of the Mozaffarids, the Qazi Ghiyath al-Din 'Ali Yazdi, to write an account of Timur's campaign in India that followed in 800-801/1397-8, on the strength of examples of his Arabic and Persian prose writing that had attracted attention. The result was the *Ruznama-ye ghazavat-e Hendustan*, or *Sa'adatnama*, completed in 802/1399, containing a brief account of Timur's conquests, followed by a detailed report of his Indian campaign, and concluding with an account of the construction of the mosque of Bibi Khanum in Samarqand.²³ The author aimed for, and achieved, a history in clear and straightforward language (*beh-'ebarati az takallof dur va beh-fahm nazdik*), though not without literary flourishes and the inclusion of many Qur'anic and verse quotations, particularly in the account of Timur's victory outside Delhi. Ghiyath al-Din came from a long established family of religious scholars in Yazd, and his son Shehab al-Din was also an historian; the later local authors refer to both, though not specifically to Ghiyath al-Din's chronicle of Timur's Indian campaign.²⁴ It is clear that he did not accompany Timur to India himself. Iraj Afshar's recent edition of this important text includes a chronology of Timur's career and of the Indian campaign, along with the usual indexes, in addition to an introduction that pays particular attention to the author's pedigree.²⁵

Ghiyath al-Din's loyalties quickly switched to the new regime and he mentions how the security that prevailed under Timur and his *darughas* of good character encouraged merchants to come and go in safety, particularly in Yazd, and the "[hot] simoom of discord and strife was changed for the [cool] breeze of peace and calm".²⁶ Yazd thus became part of the Timurid Empire, but achieved prosperity and some degree of

independence in the first half of the 15th century, free from much of the turbulence affecting Iran after the death of Timur, thanks largely to the stable rule and enlightened patronage of the Chaghatay amir-governor, Jalal al-Din Chaqmaq (c. 831-50/1422-47 and again briefly afterwards) and his wife (Bibi Fatema Khatun), who undertook extensive building programmes in the city.²⁷ It was only with the death of the Timurid ruler, Shahrukh (850/1447) and the resulting political break down, that the prosperity of the city began to wane, according to the 15th-century chroniclers, thus linking stability with righteous rule in an appropriately didactic manner.²⁸ The insistence on the sterling Islamic character of Yazd may be felt to compensate for the fact that it was also a major centre for the Zoroastrians, a community scarcely referred to in the Timurid local histories. Ja'fari merely praises the coming of Islam and the extinction of the blazing fire of the Magians, but also mentions the establishment of the fire temple (*ateshkhana*), the sound of running water still to be heard in the *dakhma* outside the city, and the Magian quarter round the stream of Shahi Na'imabad, where their efforts at cultivation produced a pleasant and fragrant garden.²⁹ Of this, only the brief contemporary mention of the Magian district (*mahalla-ye majusiyan*) is retained by Ahmad b. Hosain; otherwise like his predecessor, he confines the discussion of Zoroastrianism to the construction of fire temples in the pre-Islamic past.³⁰

The writing of local history at this time, while generated by the prosperity, commercial success and independence of the city, was also part of a seemingly wider association of Yazd with a number of authors that reveals a remarkable and sustained tradition of historiography, perhaps fostered by the large number of madrasas active there.³¹ The long period of stability, patronage and construction under the governorship of Chaqmaq was clearly also an important factor in creating the conditions in which civic pride could be developed and expressed – conditions not again seen for several centuries.

Apart from Ghiyath al-Din 'Ali's account of Timur's campaign into India, the next Yazdi historian to undertake a commission from the ruling elite was Sharaf al-Din 'Ali Yazdi, a celebrated poet and polymath (d. 858/1454). He was asked by Ebrahim-Soltan, son of Shahrukh and governor of Shiraz since 817/1414, to write a history of Timur's

conquests, which he undertook in the *Zafarnama* (Book of Victory).³¹ This was completed between 822 and 828/1419-25. Yazdi himself was born and died in Taft, but apart from serving at the court of Ebrahim-Soltan, he was also in the entourage of Shahrukh's rebellious grandson, Soltan-Mohammad b. Baysonghor, and served in exile in Samarqand in the observatory of Ologh Beg (d. 853/1449).

As mentioned, Sharaf al-Din 'Ali Yazdi's work is greatly renowned for its literary style, more in the vein of Mo'in al-Din's *Movaheb-e Elahi* than Ghiyath al-Din's *Sa'adatnam*, which he evidently used, while not specifically referring to it. Although the bombastic rhetoric and sycophantic treatment of the exploits of his subject – Iraj Afshar's views on which have been mentioned above – receive the opprobrium of those in search of a dispassionate historical record, the *Zafarnama* remains one of the great works of mediaeval Persian historiography and a significant part of the tradition of historical writing in the city: as witnessed by the lengthy account of 'Ali Yazdi in the *Jame'-e Mofidi*, where he is presented as the foremost member of the '*olama* and *fozala* of the city.'³² 'Ali Yazdi achieved renown as a poet as much as an historian, and the local historians record many of his verses and inscriptions on buildings in the city.³⁴ Among Iraj Afshar's more recent publications are two volumes of Yazdi's poetry (*manzummat*) and ornate prose texts (*ensha'*, chancery documents: *monsha'at*), on the basis of a collection of Yazdi's writings preserved in Istanbul.³⁵ His introduction gives a thorough survey of 'Ali Yazdi's works and the range of historical material contained in these poems, inscriptions, and pieces of official correspondence.

Also in the service of Soltan-Mohammad son of Baysonghor around the same time, before the latter's death in late 855/early 1452,³⁶ was another author of Yazdi origin, Taj al-Din Hasan b. Shehab Yazdi, author of the *Jame' al-tawarikh-e Hasani*, a universal history down to the year 857/1453. He refers to 'Ali Yazdi both as a source of information and as a participant in current affairs,³⁷ but his own historical writing is of a different order and Afshar notes that despite Taj al-Din's claim to be a poet, his verse is weak and lacking poetic taste.³⁸ Taj al-Din was chiefly resident in Kerman, although he provides much information also about Yazd, probably partly provided by his son Ghiyath al-Din 'Ali (not to be confused with the author of the *Sa'adatnama*), who was

there for a time.³⁹ Taj al-Din also identified himself as an astronomer (*monajjem*) and Yazd, at least, had a strong connection with astronomical work at this period, through the establishment of the Vaqt-o Sa'at observatory in the city, founded in 725/1325.⁴⁰ There is no record of his career as an astronomer, although it is of interest that he uses the animal calendar in dating events.⁴¹ The last of the prominent Yazdi chroniclers to be mentioned here, before turning to local historians of the city, was also an astronomer. Molla Jalal al-Din Mohammad Monajjem Yazdi was in the service of the Safavid Shah 'Abbas, whose history he recorded in the *Tarikh-e 'Abbasi*, an annalistic chronicle of the reign down to the year 1020/1611.⁴² Interestingly, both Monajjem Yazdi's son and grandson wrote Safavid histories, though without any special connection to Yazd; the family does not appear to be mentioned in the later annals of the city, either as historians or astronomers,⁴³ although Jalal al-Din's celebrated role in recording the stages of Shah 'Abbas's march to Mashhad in 1010/1601 is noted in connection with Mohammad-Zaman Soltan's participation.⁴⁴

HISTORIANS FROM YAZD: LOCAL HISTORIES

As stated earlier, Yazd has generated a considerable number of local histories; a list of some of these is given by Afshar in his *Yadgar-ha-ye Yazd* and a more detailed description, with excerpts, in his *Yazdnama*.⁴⁵ We will look briefly at the four main works mentioned earlier, with regard to Afshar's presentation of them, starting with the two 15th-century histories. The first, the *Tarikh-e Yazd* by Ja'fari, was written in c. 845/1441. Essentially, it covers the early history of the city and its buildings from the time of Alexander (the putative founder of Yazd), in a chronological survey down to the time of Shahrukh, followed by three sections devoted to the religious buildings; the gardens and districts of Yazd; and the streams and qanats in and around the town.⁴⁶ It is rather an engaging work, with the author's presence in evidence especially when recording his experiences in the cemeteries around the city.⁴⁷ Afshar's introduction draws attention to its importance in recording the patronage of religious buildings, and its "first hand information ... concerning the madrasas, mosques, gardens, waters and other traces of Yazd... every-

thing in the book is useful, fresh and precise within its limits" (p. x). Its rather everyday and sometimes faulty language, "needless to say, does not detract from its historical value" (p. ix). In the appendices attached to the edition, and again in the *Yazdnama*, Afshar is concerned with further efforts to identify the author and his composition of other works, such as the largely unpublished general history, the *Tarikh-e Ja'fari* or *Tarikh-e kabir*, together with a discussion of the manuscripts and the use made of them by previous scholars.⁴⁸ He also gives extended comments on the text, particularly names and places, offering some corrections and also a list of unusual terms. Included in these notes is a brief comparison of the section headings with the *Tarikh-e jadid-e Yazd* (pp. 172-75).

A similar approach is taken towards this work. Ahmad b. Hosain's dissatisfaction with Ja'fari's *Tarikh-e Yazd* led him to produce his own version, called the "new" history, *Tarikh-e jadid-e Yazd*, completed in 862/1458. The differences are again briefly noted in Afshar's *Yazd-nama*,⁴⁹ showing that the structure is essentially the same, though the later author adds two chapters at the end, concerning the political events occurring between the death of Shahrukh and the death of Mohammad-Soltan, and then leading to the takeover by Jahanshah Qara Qoyunlu, material partly introduced also in the opening chapter (pp. 9-13). As Afshar notes, the difference otherwise is mainly that the information given in the later work is more extensive and detailed and adds a number of new points concerning what the author himself observed in the time of Jahanshah.⁵⁰ Among the valuable aspects of the *Tarikh-e jadid*, Afshar mentions the useful technical architectural vocabulary; the data on bureaucratic practices of census taking, payment of wages and tax collection; the account destruction of much of Yazd in the great flood of 860/1456; and the information about the madrasas in the city—with 40 named colleges—showing that it was a significant religious centre at that period.⁵¹

Much of the information provided by these two 15th-century writers is incorporated, with a few additions on the contemporary situation, into the first volume of Mohammad Mofid Bafqi's *Jame'-e Mofidi*, written between the years 1082-90/1671-79.⁵² More valuable is the third volume, a biographical work on the prominent men of Yazd, together

with some details of the cemeteries (*mazārāt*) and tombs of the city and the geography of its environs. Afshar gives a very full survey of the contents of the whole work, the surviving manuscripts (including some located after his edition was published), and those of the *Mokhtasar-e Mofidi*, together with a brief summary of the author's biography and the value of the work.⁵³ After a career as an accountant in Yazd, the author travelled widely via Isfahan, the 'atabat (Shi'i shrines) in Iraq, Basra and then to India, where he composed his book. It was not, therefore, written in the context of local patronage or the significant development of the city, Yazd at this time being under the control of the Safavid central government and lacking local autonomy, especially under officials who were not local to the area.

As for its value, Afshar considers the work is extraordinarily useful for the historical and social details it contains: in the use of administrative terms; religious and secular posts; the different occupations and classes of the people; endowment of benefactions; the appointment and dismissal of officials; and the ranks and organisation of military and administrative affairs. Secondly, it contains particularly unique information about scholars and notables from Yazd who left Iran for India. Thirdly, the incidental information about the Zoroastrians allows an insight into their living conditions and place in society at that period;⁵⁴ fourthly, it contains unparalleled historical-geographical data, indicating that Yazd was divided into 17 quarters and providing information about the dates that villages, qanats, ab-anbars, mosques and madrasas were established; finally, it contains much historical information about events in the Safavid period.⁵⁵ According to Afshar, the second volume, on Safavid history, is worthless, as it merely copies from the *Habib al-siyar* and 'Alam-ara-ye 'Abbasi.⁵⁶ Insofar as the surviving text seems not to go beyond the year 1003/1595, this assessment is possibly correct; it would nevertheless be interesting to see if it is a complete reproduction of its source(s) and if not, what Bafqi chose to include or exclude. The third volume is remarkable for the long account it contains of the author's life and travels, and a concluding section of stories, culled partly from other sources such as the *Habib al-siyar*, *Negarestan*, 'Aja'eb al-makhlūqat, etc. There is considerable material here for a study not only of 17th-century Yazd, but of the outlook and experiences of one of the

many Iranian scholars to gravitate to India in the Safavid period.

Another lengthy gap intervenes before the composition of the final work to be mentioned here, the *Jame'-e Ja'fari* of Mohammad Ja'far Na'ini.⁵⁷ This was commissioned as a sequel (*zail*) to the *Jame'-e Mofidi*, intended to fill in the gap in the narrative of the governors of Yazd between the completion of the former (in 1096/1685) and the time of Mohammad Taqi Khan Bafqi, who was governor of the city from 1161 to 1213/1748-98, and then to continue with the history of Yazd under his descendants. The request was made by Taqi Khan's son, 'Abd al-Reza Khan, and was begun in 1245/1829.⁵⁸ The work is sometimes called the *Tarikh-e Khavanin* for its treatment of the governing dynasty of khans, from the Afshar and Zand periods down to the reign of Fath-'Ali Shah Qajar. It is a detailed political history of events in southern Iran in particular in this turbulent period, with often unique information not found, for example, in the richly documented local history of Kerman.⁵⁹

Among the other valuable material in the *Jame'-e Ja'fari*, Afshar characteristically singles out terminology for craftsmen, trade guilds and government offices; the types of receipts of different professions especially in textile manufacturing, silk workers, dyers, fullers, those working with crimson and scarlets etc., as well as the customs and the bazaar for pack animals; the means of enforcing government principles in the provinces on the basis of a unique decree of Mohammad 'Ali Mirza; unusual Yazdi words and rare expressions; the inclusion of verses of two contemporary poets, Qaza'i and Azad, and the information about the gardens and buildings erected by the khans in Yazd.⁶⁰ The edition is accompanied by numerous useful indices.



Recalling Afshar's words referred to above, concerning the relative reliability of local histories of dynasties vis-à-vis histories of cities, this may seem paradoxical, given his evident critique of the medieval historians such as 'Ali Yazdi and his praise for the works of Ahmad b. Hosein or Mohammad Mofid. But the situation is evidently reversed in modern times, with an implied deterioration in the quality of local history

writing. This clearly cannot apply to Afshar himself and his long and fruitful engagement with the history of Yazd. But here, in conclusion, there must be a caveat: it would perhaps not be correct to say that Iraj Afshar was concerned with a real historiographical analysis of these texts, in terms of the authors' audience, motivations, methods and engagement with the purpose of history, or even the literary or intellectual context in which they were writing. In all his textual editions, Afshar was keenly aware of the value of these local and general histories for their terminology and language, use of sources, and what they revealed of ordinary life, social and economic affairs, local customs, administrative terms and practices, family history and so on. Most of his editions, increasingly as his work continued, contained multiple indexes of terms and vocabularies, as well as the more usual names and places, in addition to his own explanatory endnotes. His vast oeuvre, extraordinary in its range and attention to linguistic (and codicological) detail, remains inspired by the desire to discover and record information for the use of other researchers,⁶¹ rather than to inform historical writing of his own. It is the work of an editor, a cataloguer and compiler, an indexer and bibliographer – in short, a master librarian, who has himself become part of the history of Yazd.

NOTES

¹ Published in *Ayandeh* 19/7-9 (1372/1993), pp. 793-96.

² Jalali, "Mard-i mardan-i Yazd", *Bukhara* 81 (1390/2011), p. 830.

³ *Ibid.*, pp. 423-59, contributions by Homa Katouzian, Mahmud 'Enayat, Naser Takmil-Homayun, Mas'ud 'Erfaniyan and Sa'id Jalali.

⁴ Afshar, "Iranian historiography in Persian", in *The East and the meaning of history. International conference (23-27 November 1992)*, Rome (1994), pp. 219-42; French version, rather more stylish and including a bibliography, under the title "L'historiographie persane", *Lugmān* 10/2 (1994), pp. 57-72.

⁵ Afshar, "Iranian historiography", p. 242 (not in the French version).

⁶ For a more extended example, see the recent volume, *Yazd dar asnad-e Amin al-Zarb*, ed. Asghar Mahdavi & Iraj Afshar, Tehran (1380/2001).

⁷ Afshar, "Iranian historiography", pp. 223-4; French version (clearer but briefer), pp. 60-61. Cf. the views of Shahrokh Meskoob, *Iranian nationality and the Persian language*, tr. Michael Hillmann, ed. John R. Perry, Washington D.C. (1992), esp. pp. 77-80.

⁸ Afshar, "Iranian historiography", p. 225, translation modified; French version (briefer), p. 61.

⁹ Afshar, "Iranian historiography", p. 241; French version, p. 71. For a selection of these, see Iraj Afshar, ed. *Yazdnama*, vol. I, Tehran (1371/1992), pp. 131-40.

¹⁰ Tehran, vol. I, 1348/1970, vol. II, 1354/1975, vol. III, 1373/1994; for a brief but appreciative review of the first two volumes, see J. Aubin in *Le monde iranien et l'Islam* 3 (1975), p. 132.

¹¹ Ms. in St Petersburg National Library, PNS 201.

¹² Afshar, *Yadgar-ha-ye Yazd*, I, pp. 26-30; for full bibliographical details of these texts, see below.

¹³ "Persian local histories: the tradition behind them and the assumptions of their authors", in *Yād-Nāma, in memoria di Alessandro Bausani*, vol. 1, *Islamistica*, Rome (1991), pp. 227-38.

¹⁴ "Local history in ninth/fifteenth century Yazd: the *Tārīkh-i Jadīd-i Yazd*", *Iran* 27 (1989), pp. 75-9.

¹⁵ "Local histories of Southern Iran", in *History and historiography*, ed. J. Pfeiffer *et al.*, Wiesbaden (2006), pp. 267-81.

¹⁶ One cannot push this matter too far here; some of the historians of Yazd, including Iraj Afshar himself, were not born there (cf. Na'ini "Tarab", born in Isfahan); but we may note for instance that Nasir al-Din Monshi Kermani, author of the *Semt al-'ula*, was a native of Yazd.

¹⁷ E.g. E. Beazley & M. Harverson, *Living with the Desert. Working buildings of the Iranian plateau*, Warminster (1982)

¹⁸ A.K.S. Lambton, "Yazd", in *El*², XI, pp. 305-6; C.E. Bosworth, "Dailamīs in central Iran: the Kākūyids of Jibāl and Yazd", *Iran* 8 (1970), 73-95, and S.C. Fairbanks, "Atābakān-e Yazd", in *Elr.* II, 900-902.

¹⁹ See Jean Aubin, "Le patronage culturel en Iran sous les Ilkhans. Une grande famille de Yazd", *Le Monde Iranien et l'Islam* 3 (1975), pp. 107-18.

²⁰ See P. Jackson, "Muẓaffarids", in *El*³, VII, pp. 820-22.

²¹ Khonji-Esfahani, *'Alam-ara-ye Amini*, ed./tr. Minorsky & Woods, London (1992), tr. pp. 10-11.

²² Kotbi, *Tarikh-e Al-e Mozaffar*, ed. 'A. Nava'i, Tehran (1364/1985), p. 27; the author is sometimes referred to as Kotobi (or even Giti).

²³ See John E. Woods, "The rise of Timūrid historiography", *Journal of Near Eastern Studies* 46 (1987), pp. 93-6. He suggests part of the work as we have it now was completed later.

²⁴ See Ja'fari, *Tarikh-e Yazd*, ed. Iraj Afshar, Tehran (1338/1960; 2nd ed. 1344/1965). Reference is made here to the first edition, p. 121; and Ahmad b. Hosain, *Tarikh-e jadid-e Yazd*, ed. Iraj Afshar, Tehran (1345/1966; 2nd ed. 2537 shahanshahi/1978); reference is made here to the second edition, p. 169.

²⁵ Ghiyath al-Din 'Ali Yazdi, *Sa'adatnama*, ed. Iraj Afshar, Tehran (1379/2000), intro., pp. x-xii.

²⁶ Ghiyath al-Din, *Sa'adatnama*, p. 35.

²⁷ The *waqfnama* of Chaqmaq was published by Iraj Afshar in *Yadgar-ha-ye Yazd*, II, pp. 162-83. See also the PhD thesis of Renata Holod, "Architecture, patronage and setting: a case study: Yazd 1300-1450", Harvard University (1972).

¹⁸ See the study by Beatrice Forbes Manz, *Power, Religion and Politics in Timurid Iran*, Cambridge (2007), esp. pp. 245-75; Miller, p. 78.

¹⁹ Ja'fari, pp. 1, 13-14, 151.

²⁰ Ahmad b. Hosain, p. 220; see also pp. 35, 38-9 for the fire temple in "Balashgerd" and Qobad's building activities.

²¹ A point made by Miller, p. 75.

²² See the excellent dissertation by Evrim Binbaş, "Sharaf al-Dīn 'Alī Yazdī (ca. 770s-858/ca. 1370s-1454): Prophecy, politics, and historiography in late medieval Islamic history", Chicago (2009).

²³ Mohammad Mofid Bafqi, *Jame'-e Mofidi*, ed. Iraj Afshar, Tehran (1342/1963), pp. 299-304.

²⁴ E.g. Ja'fari, pp. 41-42, etc. and index; Ahmad b. Hosain, pp. 93-94 etc. and index; see also the detailed review of biographical information this work contains, by 'Alī Asghar Hekmat, "Maulana Sharaf al-Din 'Alī Yazdī", in Iraj Afshar, ed. *Yazdnama*, pp. 445-53 (reprinted from *Ayandeh* 3, 1323/1944).

²⁵ For this and additional mss, see Afshar's introductions to 'Alī Yazdī, *Monsha'at*, Tehran (1388/2009), pp. xii-xiii, xiv-xvi; and *Manzumāt*, Tehran (1386/2007), pp. 12-13.

²⁶ It is of passing interest that Soltan-Mohammad's sister was a wife of Chaqmaq, the long-serving governor of Yazd.

²⁷ Hasan b. Shehab, *Jame' al-tawarikh-e Hasani*, ed. H. Modarresi-Tabataba'i & Iraj Afshar, Karachi (1987), intro., p. 10, cf. text p. 73. For Soltan-Mohammad's career after the death of his grandfather, Shahrokh, see Manz, *Power, Politics and Religion*, pp. 259-62, 267-70, including references to 'Alī Yazdī's part in events, e.g. pp. 258, 271.

²⁸ Ebn Shehab, ed. Afshar, intro., p. 15.

²⁹ Ebn Shehab, pp. 99-100, 145, and intro., p. 15.

³⁰ Ahmad b. Hosain, pp. 122-25.

³¹ See Charles Melville, "The Chinese Uighur animal calendar in Persian historiography of the Mongol period", *Iran* 23 (1994), p. 93.

³² *Tarikh-e 'Abbasi ya ruznama-ye Molla Jalal*, ed. S. Vadidniya, Tehran (1366/1987). See Sholeh A. Quinn & Charles Melville, "Safavid historiography", in C. Melville, ed. *Persian Historiography*, London (2012), esp. pp. 215, 217.

⁴³ Bafqi refers to only a small number of astronomers, pp. 391-93.

⁴⁴ Bafqi, p. 473. He gives the year as 1009 hejri and says the walk took 20 days; for Mohammad-Zaman's participation, see also Melville, "Shah 'Abbas and the pilgrimage to Mashhad", in C. Melville, ed. *Safavid Persia*, London (1996), pp. 199-200.

⁴⁵ Afshar, ed. *Yazdnama*, pp. 49-129.

⁴⁶ Cf. *ibid.*, pp. 52-53.

⁴⁷ See Charles Melville, "The Mongol and Timurid periods, 1250-1500", in C. Melville, ed. *Persian Historiography*, London (2012), pp. 180-81.

⁴⁸ Ja'fari, ed. Afshar, notes, pp. 163-71; Afshar, *Yazdnama*, pp. 53-60.

⁴⁹ *Yazdnāma*, pp. 62-64.

⁵⁰ *Ibid.*, p. 64.

⁵¹ *Ibid.*, pp. 64-5; Ahmad b. Hosain, ed. Afshar, intro., p. 8.

⁵² Ed. Iraj Afshar, Tehran (1342/1963).

⁵³ Bafqi, vol. III, ed. Afshar, intro., pp. vii-xii, greatly expanded in Afshar, ed. *Yazdnama*, pp. 66-106, including a complete list of the contents of volume II, of political history (pp. 81-95), together with the text of part of this (pp. 161-75), the headings of which do not entirely match those listed earlier.

⁵⁴ See e.g. Bafqi, p. 503, for the dismissal of Mir Kamal Bandarabadi in 1054/1644 for suspected embezzlement of government funds and mistreatment of the Magian subjects.

⁵⁵ Bafqi, ed. Afshar, intro., p. xii; Afshar, ed. *Yazdnama*, pp. 75-77.

⁵⁶ See above, n. 53.

⁵⁷ Ed. Iraj Afshar, Tehran (1353/1974).

⁵⁸ Na'ini, pp. 229-30.

⁵⁹ Na'ini, ed. Afshar, intro., pp. ix-x.

⁶⁰ *Ibid.*, pp. xix-xxi; Afshar, ed. *Yazdnama*, pp. 115-16.

⁶¹ As Afshar's own repeated remarks to this effect, e.g. at the outset of the *Yazdnama*, and pp. 133 (concerning his edition of the *Tazkira-ye Jalali*), 217 (concerning the *Tarikh-e Yazd* of Ahmad Taheri).

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Codicological Report on *Mufīd al-Khāṣṣ fī ‘Ilm al-Khawāṣṣ*

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(Translated from the Persian by Mohammad Mehdi Baghi)

ABSTRACT

THE PRESENT ARTICLE is a codicological survey of a manuscript of *Mufīd al-Khāṣṣ fī ‘Ilm al-Khawāṣṣ* (Source Book on the Science of Properties), attributed to Muḥammad ibn Zakariyā’ al-Rāzī. The manuscript in question (ms. 5135, Āstān-i Quds-i Raḍawī), the second volume of the book, was copied for the library of the Mamlūk ‘Imād al-Dīn Ismā‘īl ibn Nāṣir al-Dīn Muḥammad ibn Maṣṣūr Qalāwūn (r. 743-746/1342-1345). Fifty folios of the manuscript contain illustrations of men, animals, and plants; as some folios contain two or more illustrations, the total number of such illustrations run to 74.

The article opens with the reliability of the attribution of the book to al-Rāzī and it proceeds to include the following: a list of its contents; different codicological aspects of the manuscript, e.g. decorations, orthography, symbols, and notes of collation (*‘arḍ*) and those of owners and readers.

Keywords: agriculture; *Mufīd al-Khāṣṣ fī ‘Ilm al-Khawāṣṣ*; illustrated manuscripts; collation notes.

BACKGROUND

The facsimile edition of *Mufīd al-Khāṣṣ fī ‘Ilm al-Khawāṣṣ*, in Arabic, is in the manuscripts collection of the Āstān-i Quds-i Raḍawī Library

(general no. 5135, medical mss. 103) and it is published in this series by the National Museum of the History of Medical Sciences (Mūzih-yi Milli-yi Tārikh-i 'Ulūm-i Pizishkī). Although the name of Muḥammad ibn Zakariyā' al-Rāzī (251-313/865-925), the renowned Iranian physician and philosopher, is clearly mentioned as the author, it would be better to consider it as one of the works attributed to him. This manuscript is first mentioned in a manuscript hand-list, dated 1272/1855 and preserved at the Mar'ashī Library, Qum, which was prepared by Mullā Muḥammad Ḥasan, Mullā Muḥammad Ismā'īl, Mullā 'Abd al-Razzāq, and Mullā Muḥammad Riḍā:

The second part of *Mufid al-Khāṣṣ* ft 'Ilm al-Khawāṣṣ by Ibn Dhakariyā-yi (sic) Rāzī, *khisti* [*khisht?* square trim, measuring about 22 in 22 cm] size, Arabic script, eleven lines, frontispiece (*sarlawh*), the first two folios and all chapter headings in gold, illustrated, vocalised, reddish brown Dawlatābādī paper, papier-mâché covers with red blind-tooled good leather, floral and gold *doubleur*, with flap, endowed by Nādir [Shah], without binding.²

Mention is briefly made in *Firdaws al-Tawārikh*, in treating the hand-list of manuscripts at the Āstāna, prepared in 1297/1879, of the *Mufid al-Khawāṣṣ*;³ mention is later made in Muḥammad Ḥasan Khān I'timād al-Saltāna's *Maṭla' al-Shams*⁴ of a manuscript bearing the title *Khawāṣṣ al-Asmā'* which was probably a manuscript copy of the work in question.

In his *Fihrist-i Nusakh-i Khattī-yi Āstān-i Quds-i Raḍawī* (Catalogue of the Manuscripts at the Āstān-i Quds-i Raḍawī), Qā'ān Mīrzā Uktā'i, industrious librarian of the Āstāna Library, records the title of this manuscript as *Mufid al-Khāṣṣ* and states that it was endowed by the [Afshār] Nādir Shah and has fifty illustrations (*majālis-i šūrat*).⁵ Taqī Bīnish presented a better description of the book in his article, *Mufid al-Khāṣṣ*;⁶ though it was not mentioned by his successors. The work was attributed to al-Rāzī in Maḥmūd Najmābādī's *Mu'allafāt wa Muṣannafāt-i Abū Bakr ibn Zakariyā-yi Rāzī Ḥakīm wa Ṭabīb-i Buzurg-i Irānī* (The works and Compositions of Abū Bakr ibn Zakariyā' al-Rāzī, the Great Iranian Philosopher and Physician).⁷

Fuat Sezgin, under al-Rāzī's compositions and in his treatment of the manuscripts of this differently entitled work, made use of the title

employed by Maḥmūd Najmābādī and recorded it as *Mufīd al-Khawāṣṣ fi 'Ilm al-Khawāṣṣ*⁸ and stated that it was in 93 folios⁹ and had been copied in the seventh/thirteenth century.¹⁰ Sezgin records the features of the other manuscripts of the work in question as follows:

b. *Kitāb al-Khawāṣṣ* or *Khawāṣṣ al-Ashyā'*, Cairo, medicine 141, a part of a codex (119b-136b), dated 913/1507 (*Fihris al-Makhtūṭāt*, vol. 3 (2), p. 79 = ? Murat Mulla, codex 12/1836 (77b-90a).

c. *Risāla fi 'l-Khawāṣṣ*, Tehran, University, *Fihrist*, vol. 4, p. 749, no. 1033, ms. 5469 (99b-109a), dated 557/1161, previously in the 'Ulūmī collection in Yazd; Sipahsālār, codex 2864 (4401-410a), dated 1232/1816, *Fihrist*, vol. 4, p. 395.

d. *Khawāṣṣ al-Ashyā' al-Muqāwama li-'l-Amrād*, Cairo, Tīmūr Pāshā, medicine 264.

e. *Khawāṣṣ al-Ashyā'*, vol. 2, p. 237, introduced by M. Naniana Steinschneider in *Virchows Archive*, 86 (1881), pp. 122-123; and J. Ruska in *Isis*, 48 (1923), p. 5.

In his *Fīlsūf-i Rayy* (The Philosopher from Rayy), Maḥdī Muḥaqqiq, based on Abū Rayḥān al-Bīrūnī's book on al-Rāzī's works, records the title *Kitāb al-Khawāṣṣ* under "Miscellaneous Arts" (*Funūn-i Mukhtalif*) and states that the work is also mentioned by Ibn Abī Uṣaybi'a.¹¹ Muḥaqqiq also makes a reference to Muḥammad ibn Surkh al-Nishābūrī's introduction to the latter's commentary to Khwāja Abū al-Haytham al-Jurjānī's *Qaṣīda*, composed in the fourth/tenth and fifth/eleventh centuries, and also cites some quotations.¹² Muḥammad ibn Surkh is quoted as saying, "Rāzī made compositions on the properties of things" (see below).¹³ Muḥaqqiq makes references to the manuscripts in Dār al-Kutub al-Miṣriyya (no. 141 medicine) and in the Faculty of Letters, University of Tehran (no. 7/253). However, the claim as to which manuscript contains the same text available to Muḥammad ibn Surkh requires solid arguments. It may be of interest to mention in passing that in his *al-Jamāhir fi 'l-Jawāhir*, Abū Rayḥān al-Bīrūnī quotes twice from Muḥammad ibn Zakariyā' al-Rāzī's *Kitāb al-Khawāṣṣ*, once in his treatment of a synagogue in Egypt and another in a discourse on coral (*bussad*).¹⁴

The latest description of this manuscript is to be found in Ghulām'alī

'Irfāniyān's *Fihrist-i Kutub-i Khattī-yi Kitābkhāna-yi Markazī wa Markaz-i Asnād-i Āstān-i Quds-i Raḍawī* (Catalogue of Manuscripts of the Central Library and the Center for the Archives of the Āstān-i Quds-i Raḍawī),¹⁵ wherein he states:

Eleven lines; ruled; 13 in 19 [the size of the writing space without the margins in cm is hereby intended]; 83 folios; 28 in 19 [the size of the manuscript in cm]; endowed by the Afshār Nādir Shah; with collation notes ('*ard*') dated 1105/1693, 1115/1703, 1127/1715, 1266/1752, 1270/1853, 1272/1855, 1287/1870, 1289/1872, 1298/1880; copied for the library collection of 'Imād al-Dīn Ismā'il ibn Nāṣir al-Dīn Muḥammad ibn Manṣūr Qalāwūn between 743-746/1342-1345; the date seventh/thirteenth century given by Sezgin is inaccurate.

In his valuable book, *Ḥakīm Rāzī* (The Philosopher from Rayy), the distinguished scholar Parwīz Adhkā'i (Parwīz Spītāmān), in enumerating al-Rāzī's works in the chapter on natural sciences, makes mention of *Kitāb al-Khawāṣṣ* (reference is not made to the manuscript at the Āstān-i Quds-i Raḍawī), stating that the introduction to *Kitāb al-Khawāṣṣ* of al-Rāzī quoted by S. Pines is the same as the one cited by Muḥammad ibn Surkh al-Nishābūrī, the Ismā'īlī scholar, in a chapter entitled *Andar Ma'nā-yi Khāṣṣiyyat-hā* (On the Meaning of Properties) as follows:

Know that Muḥammad ibn Zakariyā' al-Rāzī wrote a book on the properties of the things ... Many a scholar has made mention and quoted al-Rāzī's *Kitāb al-Khawāṣṣ*, the earliest of whom was Abū Zayd al-Balkhī who was a contemporary of al-Rāzī ... I have also read two quotations from al-Rāzī by al-Mas'ūdī and Ibn al-Faḥr and most particularly by Abū Rayḥān al-Bīrūnī, a follower of al-Rāzī's school. For the names of others who quoted al-Rāzī, one may consult the works of Dr. [Mahdī] Muḥaqqiq.¹⁶

Having briefly treated the references made to the work in question, further details will be included below which may be of interest to the users of this facsimile edition. The table of contents, closely following the original text, is as follows:

1. Description of the vapour, repelling snakes and scorpions (*ṣifa bukhūr yahrubu min-hu 'l-ḥayyāt wa 'l-'aqārib*), p. 4;

2. Description of the smoke, repelling all the snakes (*šifa dukhna yahrubu min-hā jamīʿ al-ḥayyāt*), p. 7;
3. Discourse on repelling ants and exterminating them (*al-qawl fī ʿard al-naml wa qatli-hunna*), p. 8;
4. Discourse on scorpions (*al-qawl fī ʿl-ʿaqārib*), p. 10;
5. And also [treatment of] one stung by a scorpion (*wa ayḍan li-man ladagha-hu ʿl-ʿaqrab*), p. 13;
6. Discourse on repelling bedbugs and mosquitoes (*al-qawl fī ʿard al-baqq wa ʿl-jirjis*), p. 14;
7. Discourse on the work [done at an] extraction house and its description (*al-qawl fī ʿamal bayt al-ʿašīr wa šifatihi*), p. 19;
8. Discourse on the description of the production of vinegar (*al-qawl fī šifa ʿamal al-khall*), p. 22;
9. Description of pepper vinegar (*šifa khall al-fulful al-filfil*), p. 25;
10. Discourse on kinds of trees and gardens and their treatment (*al-qawl fī anwāʿ al-shajar wa ʿl-basātīn wa ʿilāj dhālika*), p. 25;
11. Discourse on transferring a large tree from one place to another (*al-qawl fī tahwīl al-shajar al-kibār min makān ilā makān*), p. 34;
12. Discourse on the cultivation of black poplar, cypress, and quince (*al-qawl fī taʿliyat al-šanūbar wa ʿl-sarw wa ʿl-tūj*), p. 38;
13. Discourse on the description of fig (*al-qawl fī šifat al-tīn*), p. 39;
14. Discourse on jujube, apple, and walnut (*al-qawl fī ʿl-ʿunnāb wa ʿl-tuffāḥ wa ʿl-jawz*), p. 45;
15. Discourse on planting pomegranate (*al-qawl fī ghars al-rummān*), p. 48;
16. Discourse on planting walnut (*al-qawl fī ghars al-jawz*), p. 49;
17. Discourse on planting chestnut (*al-qawl fī ghars al-shāh-balūṭ*), p. 50;
18. Silencing frogs overnight (*iskāt al-difādī bi-ʿl-layl*), p. 51;
19. Discourse on moles (*al-qawl fī ʿl-dhabāb*), p. 52;
20. Discourse on repelling dung beetles (*al-qawl fī ʿard al-khanāfis*), p. 53;
21. Discourse on fleas (*al-qawl fī ʿl-barāghīth*), p. 53;
22. Discourse on repelling wasps (*al-qawl fī ʿard al-zanābīr*), p. 55;
23. Discourse on repelling dogs (*al-qawl fī ʿard al-kalb*), p. 55;
24. Discourse on the manner of planting the vine and the times and the

- manner of the preparation of extract and all the treatments for grapevines (*al-qawl fī kayfiyya ghars al-karm wa fī ayy al-awqāt wa kayfa yu'mal bi-'il-'aṣīr wa jamī' ilāj al-kurūm*), p. 57;
25. Discourse on description of fruits (*al-qawl fī ṣifāt al-fawākīh*), p. 71;
 26. Grape (*al-'inab*), p. 71;
 27. Discourse on tending apple (*al-qawl fī ḥifẓ al-tuffāḥ*), p. 74;
 28. Discourse on tending pear (*al-qawl fī ḥifẓ al-kummtharī*), p. 76;
 29. Discourse on tending quince (*al-qawl fī ḥifẓ al-safarjal*), p. 76;
 30. Discourse on tending plum (*al-qawl fī ḥifẓ al-ajjās*), p. 78;
 31. Discourse on tending pomegranate (*al-qawl fī ḥifẓ al-rummān*), p. 78;
 32. Discourse on tending peach (*al-qawl fī ḥifẓ al-khūkh*), p. 79;
 33. Discourse on tending fig (*al-qawl fī ḥifẓ al-tīn*), p. 80;
 34. Discourse on the useful properties of planting pomegranate (*al-qawl fī khawāṣṣ nāfi'a fī ghars al-rummān*), p. 81;
 35. Discourse on planting mulberry (*al-qawl fī ghars al-tūth*), p. 83;
 36. Discourse on planting almond (*al-qawl fī ghars al-lawz*), p. 85;
 37. Discourse on the production of raisin (*al-qawl fī ṣan'at al-zabīb*), p. 86;
 38. Discourse on the deodorization of foul smelling untanned hides ... (*al-qawl fī taṭṭayīb al-adhān al-bashmat al-karīhat al-rā'iḥa ...*), p. 87;
 39. Discourse on refining grease and oil (*al-qawl fī taṣfiyat al-dahn wa 'l-zīt*), p. 90;
 40. Discourse on gardens and vegetables (*al-qawl fī 'l-basātīn wa 'l-buqūl*), p. 91;
 41. Discourse on planting lettuce with different kinds of vegetables and the properties of lettuce (*al-qawl fī zaar' khassa fī-hā alwān min al-buqūl wa khawāṣṣ al-khass*), p. 94;
 42. Discourse on the description of white beet and description of its function (*al-qawl fī ṣifāt al-salq wa ṣifa 'amalihi*), p. 99;
 43. Discourse on cabbage and description of its function (*al-qawl fī 'l-karanb wa ṣifa 'amalihi*), p. 101;
 44. Discourse on okra and it is mallow (*al-qawl fī 'l-mulākhiyyā wa hu-wa 'l-khabbāz*), p. 105;

45. Discourse on radish and turnip (*al-qawl fī 'l-fujl wa 'l-saljam*), p. 107;
46. Discourse on celery and description of its function (*al-qawl fī 'l-karafs wa šifa 'amalihi*), p. 113;
47. Discourse on rue and description of its functions (*al-qawl fī 'l-sadhāb wa šifa afā'ilihi*), p. 115;
48. Discourse on watercress and description of its function (*al-qawl fī 'l-jirjir wa šifa 'amalihi*), p. 116;
49. Discourse on pepper cress and it is peppergrass (*al-qawl fī 'l-ḥurf wa huwa 'l-rashād*), p. 118;
50. Discourse on wild chicory/endive and description of its properties (*al-qawl fī 'l-hindibā wa šifa khawāssihi*), p. 120;
51. Discourse on spearmint (*al-qawl fī 'l-fūdnaḥ*), p. 122;
52. Discourse on leek and description of its function (*al-qawl fī 'l-karrāth wa šifa 'amalihi*), p. 123;
53. Discourse on onion and its properties and benefits (*al-qawl fī 'l-baṣāl wa mā fī-hi min al-khawāṣṣ wa 'l-manāfi'*), p. 126;
54. Discourse on the description of garlic and description of its function and benefits (*al-qawl fī šifat al-thūm wa šifa 'amalihi wa manāfi'ihī*), p. 129;
55. Discourse on balm-mint and pendant amaranth (*al-qawl fī 'l-khūl wa 'l-bādarūj*), p. 133;
56. Discourse on mustard and its benefits (*al-qawl fī 'l-khardal wa manāfi'ihī*), p. 134;
57. Discourse on dill (*al-qawl fī 'l-shibitt*), p. 137;
58. Discourse on sorrel (*al-qawl fī 'l-ḥummāḍ*), p. 138;
59. Discourse on the description of purslane (*al-qawl fī šifat al-baqlat al-ḥumaqā'*), p. 139;
60. Discourse on pumpkin and cucumber and (water) melon and description of their function (*al-qawl fī 'l-qar' wa 'l-quththā wa 'l-baṭṭikh/biṭṭikh wa šifa 'amalihā*), p. 141;
61. Discourse on the description of rose and aromatic plants and what constitutes them (*al-qawl fī šifat al-ward wa 'l-rayāḥīn wa mā yushākilihā*), p. 147;
62. Discourse on lily of the valley and its description and its function

and its benefit (*al-qawl fī 'l-sawsan/susan wa šifatihi wa 'amalihi wa manfa'atihi*), p. 151;

63. Discourse on whitening the honey comb wax and it is the wax (*al-qawl fī tabyyiḍ al-mūm wa huwa 'l-sham(a)'*), p. 153;
64. Discourse on the bee and the manner wherewith nectar is extracted from summer plants (*al-qawl fī 'l-naḥl wa kayfa yuttakhadh min al-'ijli naḥlan*), p. 154;
65. Description of the beehive and the manner wherewith nectar is extracted from summer plants until honey is produced (*šifa bayt al-naḥl wa kayfa yu'malu min al-'ajali naḥlan ḥattā yu'malu 'asalan*), p. 161.

The list indicates that the folios are at times misplaced in the materials under nos. 18-23 and have been included in discussions devoted to tree plantation.

This manuscript, as mentioned above, is the second volume of the book, as explicitly stated in the decorative inscription on the first folio, containing a decorative circle on the left margin: "The second part of the *Khawāṣṣ* (*al-juz' al-thānī min al-Khawāṣṣ*).” It is reiterated in the inscription on the next two decorative pages: "The second part of the book” / *al-Mufid al-Khāṣṣ fī 'Ilm al-Khawāṣṣ* (*al-juz' al-thānī min kitāb al-Mufid al-Khāṣṣ fī 'Ilm al-Khawāṣṣ*).” The colophon reads: "The second part of the book *al-Mufid al-Khāṣṣ fī 'Ilm al-Khawāṣṣ* by the erudite scholar Muḥammad¹⁸ ibn Zakariyā' al-Rāzī, may God bless him, is complete” (*tamma al-juz' al-thānī min kitāb al-Mufid al-Khāṣṣ fī 'Ilm al-Khawāṣṣ ta'lif al-ḥakīm al-fāḍl Muḥammad ibn Zakariyā' al-Rāzī rahmat Allāh 'alayhi*; p. 65).

The first page wherein the manuscript is dedicated to the Mamlūk ruler, 'Imād al-Dīn Ismā'īl, the grandson of Maṣṣūr Qalāwūn, reads: "The second part of *al-Khawāṣṣ* / [copied] for the library collection of our lord and master, the greatest sultan / the warrior lord, the one [divinely] assisted, the protector of the frontiers, the protector of war frontiers, the triumphant / the victorious, virtuous king, the pillar of the world and religion / Abū al-Fidā' Ismā'īl, son of the fortunate, martyred sultan, the victorious king Nāṣir al-Dīn / Abū al-Ma'ālī Muḥammad, son of the fortunate, martyred sultan / the King Maṣṣūr Qalāwūn, may

Allah render his sovereignty victorious / and may he be protected by his noble Prophet by his blessing and satisfaction (*al-juz' al-thānī min al-Khawāṣṣ / li-khizāna mawlānā wa sayyidinā al-sultān al-a'zam / al-sayyid al-mujāhid al-mu'ayyad al-muthāghbir al-murābiṭ al-muzaḥḥar / al-manṣūr al-malik al-ṣāliḥ 'imād al-dunyā wa 'l-dīn / Abī 'l-Fidā Ismā'il ibn al-Sultān al-sa'id / al-shahīd al-malik al-nāṣir al-Nāṣir al-Dīn Abī 'l-Ma'ālī Muḥammad ibn al-sultān al-sa'id al-shahīd / al-malik al-Manṣūr Qalāwūn naṣara 'llāhu dawla sultānahu / wa taghammada 'l-dārāyn min nabīhi al-sharīf bi-rahmatihī wa riḍwānihī*)."

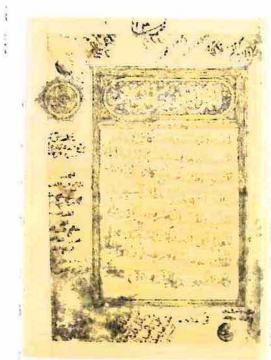
As commonly seen in other manuscripts copied for the royal library, the second decorated and illuminated folio is adorned by illuminated ruling with inscriptions in brilliant turquoise and gold sprinkling the following title in the same hand: "The second part of the book / *al-Mufīd al-Khāṣṣ fī 'Ilm al-Khawāṣṣ* and it is a very valuable and great book / containing great benefits, including the strange properties / and their wonders and the sciences of physiognomy and agriculture and preservation of / bodily organs and their medical treatments and the horses and the beasts of burden and their veterinary treatment and the animals and animal husbandry and planting of aromatic plants and vegetables and trees and their rarities and tending fruit trees / and catching fish and birds and in it [is to be found] a discourse / a great and comprehensive one, on poisoned things from among foods and drinks and clothing through vision, touch, taste, smell, and consumption / 3 / and mentioned therein are all the effects caused by eating and drinking / poisonous things and the treatment of the [harms caused by] poisonous creatures and snakes / and scorpions and including [discourses on] the animals pointing to / the poisonous things through their properties or through what is in them by [the grace of] Allah / and repelling harmful beasts and birds and insects and reptiles / and snakes and scorpions from the environs [of residences] and gardens / and farms and numerous properties in all the great arts and secrets / needed by the public and useful by their benefits / to the people in the passage of time from knowing the properties of animals / and plants and minerals and composites of those composed by the erudite scholar and philosopher Muḥammad¹⁹ ibn Zakariyā' al-Rāzī [written] for the ruler of Māzandarān (*al-juz' al-thānī min kitāb / al-Mufīd al-Khāṣṣ fī 'Ilm al-Khawāṣṣ wa huwa kitāb jalīl al-*

qadr kathīr al-manfa'a / 'aẓīm al-fā'ida yashtamilu 'alā gharā'ib al-khawāṣṣ / wa 'aja'ibihā wa 'ilm al-firāsa wa 'l-filāḥa wa siyāsāt / al-jawāriḥ wa wa ṭibbihā wa 'l-khayl wa 'l-dawābb wa bayṭaratiḥā / wa 'l-ḥayawānāt wa tarbiyatiḥā wa ghars al-riyāḥīn wa 'l-buqūl / wa 'l-ashjār wa nawādiriḥā wa ḥifẓ al-fawākih / wa ṣayd al-sumūk wa 'l-atyār wa fihi maqāla / jalīla jāmi'a fī ma'rifat al-ashyā' al-masmūma / min al-aṭ'ima wa 'l-ashriba wa 'l-malābis min ṭarīq / al-naẓar wa 'l-lams wa 'l-dhawq wa 'l-shamm wa 'l-akl / 3 / wa dhikr jamī' al-'awāriḍ li-man akala aw shariba / masmūman wa 'ilāj al-dawābb al-sammīyya wa 'l-ḥayyāt / wa 'l-'aqārib wa dhikr al-ḥayawānāt al-dālla 'alā / al-ashyā' al-masmūma bi-khāṣṣiyya aw 'ammā 'llāh fihā / wa ṭard al-wuḥūsh al-mu'adhdhiya wa 'l-ṭuyūr wa 'l-hawām / wa 'l-ḥayyāt wa 'l-'aqārib 'an al-dawr wa 'l-basāṭīn / wa 'l-zurū' wa khawāṣṣ kathīra fī kulli fann wa asrār / 'azīza yaḥtāju ilayhā 'l-jumhūr wa yantafī'u bi-fawā'idihā 'l-nās 'alā mamarr al-duḥūr min ma'rifa khawāṣṣ al-ḥayawān / wa 'l-nabāt wa 'l-ma'ādin wa 'l-murakkab min dhālika ta'līf al-ḥakīm al-'ālim al-fāḍil Muḥammad / ibn Zakariyā al-Rāzī li-malik Māzandarān)."

As commonly seen in manuscripts, the text of the book opens on the verso [i.e. reverse of the first folio].

What was mentioned above as to the contents of the book must be the inference of the copyist who seemingly intended to apprise in brief the then ruler of the contents of the book. It must have naturally been extracted from the contents of the book; however, only the second part is available to us – including some of the contents of the entire work and the contents referred to in the copyist's note but not found in the present manuscript – was seemingly included in the first part of the work which did not apparently survive the passage of time; moreover, the diversity of the contents reflects that the work originally contained further materials in another volume of the same size.

Something may be mentioned in passing regarding the author. On folio 2r (p. 3), his name is recorded as "Ibn Zakariyā al-Rāzī", which is to be found in the colophon and the name "Muḥammad" was later added to complete the author's name.



Pl. 1: The opening page of the manuscript *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ* (copied for the royal collection) (Mashhad, Āstān-i Quds-i Raḍawī Library, no. 5135).



Pl. 2: The second page of the manuscript *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ*.



Pl. 3: The third page of the manuscript *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ*.



Plate 4: Illustrations of the manuscript *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ*, pp. 4-14.



Plate 5: Illustrations of the manuscript *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ*, pp. 26-58.



Plate 6: Illustrations of the manuscript *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ*, pp. 69-123.



Plate 7: Illustrations of the manuscript *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ*, pp. 127-163.

NUMBERS OF THE MANUSCRIPT

This manuscript has been numbered thrice in the course of time.

1. Medical no. 14 (p. 1).
2. No. 55 (p. 165).
3. No. 103 = general number 5135 (present number).

TITLE OF THE BOOK

The title mentioned in the manuscript in question is not attested in Abū Rayḥān al-Bīrūnī's (d. 442/1050) list of al-Rāzī's works; however, the title *Kitāb al-Khawāṣṣ* is to be found in al-Bīrūnī's list of al-Rāzī's works.²⁰ It is stated that the title *Kitāb fi Khawāṣṣ al-Ashyā'*, mentioned in Ibn Abī Uṣaybi'a's (600-668/1203-1269) '*Uyūn al-Anbā'*', refers to the same work by al-Rāzī.²¹

The reliability of the title as recorded in the manuscript has been questioned by 'Irfāniyān who states: "Such title is rather unusual, since no rhymed (*masjū'*) title is attested in al-Rāzī's other works; the title *Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ* is totally unprecedented in his numerous works."²²

As mentioned above, the lower inscription on the third page reads that the book had been composed for a ruler in Māzandarān.

SUBJECT OF THE BOOK

It was mentioned above in the description of the contents of the book on the second folio of the manuscript that had the work in its entirety survived, it would have included the following subjects, provided that the contents of the text be commensurate with the sequence seen on that folio:

- Great benefits, including the strange properties / and their wonders
- Physiognomy
- Agriculture
- Preservation of bodily organs and their medical treatments
- Horses
- Beasts of burden and their veterinary treatment
- Animals and animal husbandry
- Planting of aromatic plants and vegetables and trees and their rarities;
- Tending fruit trees;
- Catching fish and birds;
- A discourse, a great and comprehensive one, on poisoned things from among foods and drinks and clothing through vision, touch, taste, smell, and consumption and mentioned therein are all the effects caused by eating and drinking poisonous things;
- Treatment of the [harms caused by] poisonous creatures and snakes and scorpions;
- [Discourses on] the animals pointing to the poisonous things through their properties;
- Repelling harmful beasts and birds and insects and reptiles and snakes and scorpions from the environs [of residences] and gardens and farms;
- Numerous properties in all the great arts and secrets needed by the public and useful by their benefits to the people in the passage of time from knowing the properties of animals and plants and minerals and composites of those.

However, from amongst the headings above, only the following are to be found in the present manuscript: agriculture, planting aromatic plants and vegetables and trees, tending fruit trees, and a brief discourse, in two instances, on repelling harmful creatures.

This manuscript was listed by a librarian in the Qājār times among the medical books and assigned the number 14 to it (p. 1). Nonetheless, another librarian, on the same page, in an earlier hand, had recorded the subject of the book as: "On Agriculture" (p. 1).

THE TOTAL NUMBER OF FOLIOS AND THE MISSING ONES

The manuscript currently includes 83 folios (166 pages). However, it is rather unusual that the number of the folios was inaccurately mentioned as 81 (in number and in letters) by a hand from the thirteenth/nineteenth century. The earlier pagination indicates the number 94 on the left margin of the last folio. Accordingly, assuming that no folios had been missing at the time of that early pagination, it may be stated that 11 folios (22 pages) had been missing or removed at that time; whereas, taking into account the headings mentioned in the copyist's note, more folios were most probably missing.

Considering the earlier pagination, some folios are missing before page 23 and one folio was missing between pages 156 and 157.

The later pagination in pencil ends in no. 165. The same pagination is being referred to in the present article.

The paper of the manuscript is light brownish yellow and it is rather thick as usually termed Baghdādī and Samarqandī; however, it is identified as Egyptian by ʿIrfānīyān, probably because the manuscript had been copied for a Mamlūk ruler in Egypt.

WRITING STYLE

Eleven lines in *Naskh* are to be found on each unillustrated page, the size of which is seen in the present facsimile edition. The script in the first three folios is *thulth* and the edges of the letters are shaded in black. The same writing style is followed for headings until page 14.²³

Headings are larger than the text throughout the manuscript and the initial word *al-qawl* (discourse) is written in gold to distinguish the headings and the different topics.

DECORATIONS

The text on the first page is written in an inscription and table and the lines of the table are adorned with geometrical interlaces. An inscription is seen above this table and the inscription, written in white lead ink with the edges of the letters in black, reads: "*al-juz' al-thānī min al-khawāṣṣ.*" The inscription is embellished with fleurons and floral designs. A decorative circle is drawn beside the inscription which is popular in the manuscripts made in Baghdad and those from the Mamlūk times.

The second and the third pages are ruled, though some parts of those pages, above and below, have four inscriptions written in yellow and red as tall as approximately two cm. They read:

The second part of the book / *al-Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ*. Written by the erudite scholar and philosopher Muḥammad²⁴ / ibn Zakariyā al-Rāzī for the ruler of Māzandarān (*al-juz' al-thānī min kitāb / al-Mufid al-Khāṣṣ fi 'Ilm al-Khawāṣṣ ta'lif al-ḥakīm al-'ālim al-faḍl Muḥammad / ibn Zakariyā al-Rāzī li-malik Māzandarān*).²⁵

ORTHOGRAPHY AND ORTHOGRAPHICAL FEATURES

Alif الف: the final attached *alif* with a cedilla in some words follow the writing style in the fifth/eleventh and sixth/twelfth centuries (e.g. pp. 9, 16, 75 (twice), 93, 94 (twice), 129, 145, 159).

Yā' ى: (replacing *Hamza*), as in *gharāyib* غرايب, *fawāyid* فوايد (pp. 2, 3).

Ḥā' ح: at times with a smaller *Ḥ* underneath (pp. 24, 42, 73). It was common in some early manuscripts.

Sin س: Three dots are seen underneath at times (pp. 33, 130) and sometimes with ~ above it (pp. 14, 30, 38, 42, 49).

Two dots are at times seen beneath *ṣ* (pp. 15, 18, different instances on each of the two pages).

SYMBOLS

∴ : Placed on the words in the lines indicate the missing words in the body of the text which are written in the margin (e.g. pp. 2, 6, 17, 41, 44, 54, 55 (twice), 61, 93, 141).

ح : a reference to variants, e.g. العرقين in lieu of السرقين (p. 33), سلّه in lieu of زنبيل (p. 45), بزق in lieu of بزقه (e.g. p. 109, 161).

بلغ : a reference to the collation of the text; however, there exists only one attestation of this symbol (p. 35).

^ : It is seen at times in the margin which probably indicates the copyist's doubt as to the spelling accuracy of some word(s)¹⁶ (pp. 63, 91, 95, 127, 157).

ه : a reference to the completion of a sentence and commencement of the following sentence and at times to distinguish between two statements. Two of them are usually used, one in black and the other one in gold. It is seen on all pages. At times it is a line filler (e.g. p. 35, 115, 133).

الى مكرر ... : a reference to the repetition of words (p. 148).

MARGINALIA, INTERLINEAR, AND
SUPER-LINEAR MATERIAL

- As mentioned above, some of these instances had been missing from the text and later added.
- They indicate, at times, the preferable forms which are written super-linearly (e.g. pp. 55, 60, 107).
- They are at times explanatory (e.g. pp. 52, 55).
- They at times rectify some inaccurate forms (e.g. p. 66 عجم => حصرم; p. 115 الكرفس => با ذكر صوابه ; p. 128, twice).
- Some later additions in Persian by readers (e.g. pp. 14, 43).
- Some were added by later hands (e.g. pp. 11, 52, 132).

OBLITERATION

Four lines have been obliterated and re-written on the penultimate page (p. 165). Three lines have also been obliterated on the last page from above "*wa 'l-ḥamdu li-'llāhi rabbi 'l-'ālamīn ...*" (praise be to Allah, the Lord of the Worlds; written in the same hand in gold) and the symbol of completion ه still remains.

CATCHWORDS

The majority of the folios have catchwords (*rikāba*, *pāvaraḡ*) written in a later hand in a different colour and writing style. They were apparently added when the spine binding had been tattered.

LATER ADDITIONS

The total number of notes or seal impressions²⁷ by owners and readers and collation note writers (from the Āstān-i Quds) run to thirty and may fall into five categories to be presented below in chronological order. Undated ones will be mentioned at the end of each section.

1. Ownership and Reading notes

1.1. Dated notes

935 – *al-ḥamdu li-llāh al-ghanī al-mughnī ṭāla'a fīhi 'Abd al-Qādir Muḥammad fī sana khams thulth wa tis'mā'a* (praise be to Allah, the Needless, the Enricher. It was read by 'Abd al-Qādir Muḥammad in the year 935; p. 1).

984 (?) – *qad awda'a al-dahr ... bi-yadī wa alẓama khaf... 'alayya ana 'l-'abd al-fa[qīr] Luṭf Allah ibn Ya'qū[b] katabtu fī arba' thamān[in wa tis'mā'a]* (It came into my hands by the passage of time ... and I had to ... it, I, the needy servant, Luṭf Allah ibn Ya'qūb, I wrote [the note] in 984). The date may also be read as 1084 (*arba' wa thamānīn wa alf*) (p. 1).

1.2. Undated notes

• *šara milkan li-'l-faqīr al-... Muḥammad ibn Muḥammad ibn Maḥmūd al-shahīr bi-Malik ... fī 'l-thānī ...* (It came into the possession of this need ... Muḥammad ibn Muḥammad ibn Maḥmūd, known as Malik; p. 1).

• *al-ḥamdu li-llāh ṭāla'a fīhi 'l-'a[bd] Muḥammad ibn Muḥammad ibn Muḥammad ... Luṭf Allāh ibn ...* (Praise be to Allah. It was read by the servant, Muḥammad ibn Muḥammad ibn Muḥammad ... Luṭf Allah ibn; p. 1).

• *al-ḥamdu li-llāh ṭāla'a fīhi 'l-'a[bd] 'afw rabbihi 'Abd Allah ...* (Praise be to Allah, it was read by the servant, the one seeking forgiveness from his lord, the servant of Allah ...; two illegible words) (p. 1).

- *ṭāla'a fih 'l-faqīr ilā [Allāh] Muḥammad ibn ..* (It was read by the one in need of Allah's grace, Muḥammad ibn ...; two illegible words) (p. 1).

2. Collation notes

2.1. Dated collation notes ('*arḍ*') in chronological order:¹⁸

1105 – *Risāla Mufid al-Khawāṣṣ dar 'ilm-i* ... *wa filāḥat. Qaṭ'-i buzurg, Kāghadh-i dawlatābādī, jild timāj-i kunj wa turanj-dār wa nāw-dār-i ṭalāpūsh, bih khaṭṭ-i Muḥammad ibn Zakariyā Rāzī, bih tārikh-i 5 shahr jumādā al-awwal sana 1105 takhāqūy 'il dākhil-i 'arḍ shud. Bā muhr-i biyḍī-māmānd* (large size, Dawlatābādī paper, fine sheep leather with mandorla with pendants in gold, at the hand of Muḥammad³⁰ ibn Zakariyā Rāzī, dated 5 Jumādā I 1105/2 January 1694 of the year of the hen. With oval seal impression) (p. 166).

1115 – *bih tārikh-i salkh-i shahr-i ṣafar sana 1115 dākhil-i 'arḍ-i ... shud* (collated at the end of the month Ṣafar 1115/15 July 1703). With a square seal impression in *Nasta'liq*: "*al-Wāthiq bi-'llāh al-Mahmūd 'abduhu Mahmūd* (Relying on Allah, the praised one, His servant Mahmūd)" (p. 166).

The dates of these two notes precede its endowment and probably belongs to the library of a Ṣafavid king or prince(ss).

1127 – *bih tārikh-i 8 shahr-i Dhī qa'dat al-harām sana 1127 dākhil-i 'arḍ shud* (collated on 8 Dhū 'l-Qa'da 1127/5 November 1715). With long oval seal impression in *Nasta'liq*: (... (?), 'Alī, Rajab 'Alī) (p. 166).

1262 – *bih tārikh-i shahr-i Shawwāl al-mukarram sana 1262 dākhil-i 'arḍ shud* (collated in Shawwāl 1262/September 1846). With oval seal impression in *Naskh* (p. 1).

1270 – *bih tārikh-i shahr-i Dhī 'l-qa'dat al-Ḥarām sana 1270 dākhil-i 'arḍ shud* (collated in Dhū 'l-Qa'da 1270/August 1854). With the oval seal impression in *Nasta'liq*: "*'abduhu 'l-rājī Faḍl Allāh* (the hopeful servant [of God], Faḍl Allāh)" (p. 1).

1272 – *bih tārikh-i Ramaḍān al-Mubārak 1272 dākhil-i 'arḍ shud* (collated in Ramaḍān 1272/May 1856). With square seal impression in *Nasta'liq* (p. 3).

1287 – *bih tāriḫ-i shahr Shawwāl al-Mukarram sana 1287 mulāḥaza shud* (looked into in Shawwāl 1287/January 1871). With square seal impression in *Nasta'liq*: "Abū al-Qāsim al-Ḥusaynī" (p. 3).

1297 – *shab-i dushanbih 4 shahr-i Sha'bān al-Mu'azzam luy 'il 1297 dākhil-i 'arḍ wa numra-yi 55 kitāb-khāna-yi Mubāraka shud* (collated on Sunday in the evening, 4 Sha'bān 1297/12 July 1880 was assigned the number 55 at the blessed library [of the Āstān-i Quds]. With oval seal impression in *Nasta'liq*: "Sa'id Anṣārī" (p. 165).

1289 – *bih tāriḫ-i 6 shahr-i Rabī' al-Thānī 1289 mulāḥaza shud* (look into on 6 Rabī' II 1289/13 June 1872). With square seal impression in *Tughrā* script (p. 2).

1312 – *bih tāriḫ-i chahārum-i shahr-i Rajab al-Murajjab sana 1312 mulāḥaza wa dākhil-i 'ar shud* (looked into and collated on 4 Rajab 1312/1 January 1895). With square seal impression with circular edges, in *Nasta'liq* (p. 94).

3. Undated collation notes

- *Mulāḥaza shud* (looked into). With oval seal impression (p. 165).
- *Risāla-yi Mufīd al-Khawāṣṣ dar 'Ilm-i Filāḥat bi-tā[riḫ-i ...] dākhil-i 'arḍ-i kitābkhāna-yi sarkār-i fayḍ-āthār shud* (The treatise *Mufīd al-Khawāṣṣ* ... on the science of agriculture. It was collated at the library of the generous lord) (p. 1).
- *Bih tāriḫ-i ...* (cut off) *dākhil-i 'arḍ shud* (collated in ...) (p. 1).

SEAL IMPRESSIONS

Different seal impressions are to be found on different pages, the majority of which are beneath the 'arḍ notes and the impressions are not clearly legible in the photos. These impressions may fall into the following two categories:

1. Those beneath dated notes:

- 1105/1693 (p. 166)
- 1115/1703 (p. 166)
- 1127/1715 (p. 166)

- 1145/1732 (p. 2)
- 1262/1845 (p. 1)
- 1270/1853 (p. 1)
- 1272/1855 ... al-Ḥusaynī (p. 3)
- 1287/1870 Abū al-Qāsim Ḥusaynī (p. 3)

2. Those beneath undated notes without recording the years:

Square: "*waqf-i sarkār-i fayḍ-āthār-i ḥaḍrat-i thāmin al-a'imma salāmu 'llāh 'alayhi* (endowed to the generous lord, the threshold of the Eighth Imam, may divine blessings be upon him)" (three lines) 1.5 in 1.5, repeated eleven times on pp. 2, 3, 17, 37, 45, 83, 85, 125, 135, 155, 165.

Circular: "*Allāh ... 'Alī*" (*Nasta'liq*) (p. 1).

Rectangular: "*Kitāb-khāna-yi Āstān-i Quds 'a* (*Naskh*) (p. 120 twice).

Oval: under "*mulāḥaẓa shud*" (It was looked into) (p. 165).

2. Dated modern rubber seal impressions:

- "*Sāl-i 1347 khurshīdī bāz-bīnī shud*" (looked into in the solar year 1347/1968) (signature) (pp. 1, 165).
- "*Bāz-bīn shud 1353 kh*" (looked into [in] 1353 AHS/1974) (pp. 1, 166).
- "*Bāz-bīn shud 1371 sh*" (looked into [in] 1371 AHS/1992) (p. 165 twice).

ENDOWMENT OF THE MANUSCRIPT

The endowment note (p. 2) with an unequally square seal impression, reading "*yā Sulṭān'alī ibn Mūsā al-Riḍā (z)*", indicates that the governor of Khurāsān "sent" it, along with 700 manuscripts to the Āstān-i Quds. The date is recorded as 1145/1732 which may be stated that it was endowed by the Afshār Nādir (before his accession to the throne) and it is a novel finding that Nādir had been the governor of Khurāsān. The note reads: "*jild-i madhkūr (?) az jumla haft-ṣad kitāb-i waqfī-yi bandagān-i Salmān-sha'nī wālī-yi wālā-sha'n-i Khurāsān kih irsāl-i īn āstān-i fayḍ-nishān¹ nimūda ast taḥrīran fi shahr-i Rajab-i 1145* (The mentioned (?) volume is one of the 700 books endowed by the servants

of the eminent governor of Khurāsān, the peer to Salmān [sic, in lieu of Solomon?] and sent to this blissful threshold. Written in the month of Rajab 1145/1732)" (seal impression).

It is noteworthy that since the manuscript was endowed and sent in 1145/1715, the 'arḍ notes dated 1115/1703 and 1127/1732 belong to the library of a king or ruler in possession of the manuscript in those years and as it later came into Nādir's possession, the latter endowed it in 1145/1732.

It is known, however, that Nādir "signed the endowment deeds of some estates on the first day of the month of Muḥarram to the drinking fountain (*saqqā-khāna*) of the 'Atīq courtyard (*ṣaḥn*) of the shrine and his own and also his parents' tombs and departed for Iraq on 17 Muḥarram of the same year [10 July 1732]." The manuscripts sent to the Āstāna in Rajab 1145/December 1732 had been expectedly collected from other cities and had been delivered to the Āstāna.³⁴

FURTHER NOTES

- Medicine (*ṭibb*), no. 14 (p. 1).
- On agriculture (*fi 'l-filāḥa*) (p. 1).
- The number of folios is 81 (p. 3).
- Majnūn's time has passed and it is our turn / Everybody has his five-day turn. Written by Khalil (?) ... (*dawr-i Majnūn gudhasht u nawbat-i māst / har kasī panj rūza nawbat-i ūst. Harrara Khalil*) (p. 3).
- Divine blessings to our lord, Muḥammad and his household and companions and salutations (*wa ṣalla 'llāh 'alā sayyidinā Muḥammad wa alihi wa ṣaḥābihi wa sallam*), written by a later hand at the end (p. 165).

ILLUSTRATIONS

Illustrations of people, animals, and plants are seen on fifty folios and taking into account that two or more illustrations are to be found on some folios, the total number runs to 74 as follows:

1. A man, a snake, a scorpion, and a tarantula, p. 4;
2. A man, a snake, a scorpion, a centipede, a crab, and a bee, p. 5;
3. A man, an ant, and a bird, p. 8;

4. Two men and a scorpion, p. 10;
5. A man, an ass, and a scorpion, p. 11;
6. A scorpion and a lizard, p. 12;
7. A man, a scorpion, and a flamingo, p. 13;
8. A man, a horse, a fly, and a tick, p. 14;
9. A pomegranate tree with a bird on it and two flamingos on the ground, p. 26;
10. A plane tree (*dulb*), a cypress (*sarw*), a willow tree (*khilāf*) and a flamingo below it, an almond tree with a bird on it and a flamingo (4 illustrations), p. 29;
11. A walnut tree and a squirrel beneath it, p. 30;
12. A terebinth tree (*buṭum*) and a bird on it – a hazel tree (*bunduq*) with two birds and a flamingo on it a peach tree (*durrāq*) with a bird on it and two flamingos beneath (three illustrations), p. 31;
13. An apricot tree (*mishmish*) and a bird on it – a black poplar and a flamingo on the ground (2 illustrations), p. 32;
14. A pomegranate tree (*rummān*) and a bird and a flamingo on it – a quince tree (*safarjal*) and a flamingo on it (two illustrations), p. 34;
15. An apple tree (*tuffāḥ*) and an olive tree besides it and three birds and a flamingo on them and a flamingo on the ground, p. 36;
16. A nectarine tree (*durrāqin*), p. 38;
17. A fig tree (*tīn*) and a bird on it and a rabbit besides it, p. 40;
18. A jujube tree (*unnāb*) and a bird on it – an apple tree and a flamingo on the ground (two illustrations), p. 46;
19. A pomegranate tree – a nectarine tree with a bird on it and a flamingo on the ground (two illustrations), p. 48;
20. A grapevine which is an artistic, visual, and decorative illustration, p. 58;
21. A chestnut tree (*shāh-balūt*) and a bird on it and two flamingos on the ground, p. 69;
22. A man holding a sickle and an asparagus (hellion) bush with a bird on it – dry land asparagus and a bird on it (two illustrations), p. 71;
23. A mulberry tree with two birds and a flamingo on it and two flamingos on the ground, p. 84;
24. An almond tree (*lawz*), p. 86;

25. A lettuce (from two angles) (two illustrations), p. 96;
26. A beet root (*salq*), p. 100;
27. A cabbage (*karanb*) – a cauliflower (*qunnabīt*) and a flamingo (two illustrations), p. 101;
28. An okra and a bird and a flamingo besides it – a hyacinth bush (*khubayza*, *lablāb*) (two illustrations), p. 108;
29. A turnip (*lift*, *saljam*) – a radish (*fujl*) and a bird in between (two illustrations), p. 110;
30. A garden celery, p. 113;
31. A watercress (*jirjīr*) a watercress and bird on it and a flamingo in between (two illustrations), p. 117;
32. A wild chicory (*hindibā*) – a dry land wild chicory and a bird in between (two illustrations), p. 120;
33. A wild thyme (*sa'tar*) and two flamingos beside it, p. 121;
34. A mint and an animal besides it – a mint (two illustrations), p. 122;
35. A leek (*karrāth*), p. 123;
36. An onion (*baṣal*, from two angles (two illustrations), p. 127;
37. A garlic (*thūm*), from two angles (two illustrations), p. 129;
38. A snake, a mouse, and a scorpion, p. 131;
39. Pendant amaranth (*bādrūj*), p. 133;
40. A mustard, p. 134;
41. A man on grassland and two birds on plants, p. 135;
42. A dill and a flamingo beside it, p. 137;
43. A sorrel (*ḥummāḍ*), p. 138;
44. A purselane (*baqlat al-ḥumaqā'*) and a flamingo on it, p. 139;
45. A pumpkin (*qar'*), p. 141;
46. A cucumber (*quththā*) – a melon (*baṭṭikh/biṭṭikh al-aṣfar*) (two illustrations), p. 142;
47. A rose bush (*shajarat al-ward*), p. 149;
48. A lily of the valley (*sawsan/sūsan*), three varieties (three illustrations), p. 152;
49. A pomegranate tree and two birds on it and a rabbit and a flamingo beside it – a wild thyme and a bird on it and a flamingo beside it – a rose bush (*ward*) and a bird on it (three illustrations), p. 156;
50. A man, a cow, and a few insects, p. 163.

Different water birds (e.g. flamingos) have been beautifully and artistically illustrated in the illustrations of plants besides or on them. Such illustrations may indicate the illustrator's taste as well as visual acquaintance with the habitats. It may be inferred that the illustrator must have resided in a seaside region. The illustrations are considered by 'Irfāniyān to be "Mesopotamian".

All illustrations are in color. The faces of people have been tampered with in that their eyes, eyebrows, lips, and noses have been effaced. The captions of the illustrations, in yellow or brown, are by a hand other than the copyist, since the names in the captions have been inaccurately or differently recorded; instances of which are as follows:

- قنبیط => قنبیط (p. 101)
- كرفس => كرفس (p. 113)
- هندبا => هندبه (p. 120)
- نعناع => نعناع (p. 122)
- قنثی => قنثی (p. 142)
- سوسن => سوسن (p. 152).

There is also a table for the illustrations of [men and] animals with page numbers as follows:

Horse: 14; men: 4, 5, 8, 10, 11, 13, 14, 71, 135, 163 (their clothes are similar and they all wear headgear; those on pp. 8, 11, 13, 14, 135, 163 have hair); lizard: 12; birds on trees: 29, 31 (4), 32, 34 (1), 36 (3), 40, 46, 48, 69, 71 (2), 117, 135 (2), 156 (2); ass: 11; crab: 5; rabbit: 40, 156; tarantula: 4; bee: 5; squirrel: 30; scorpion: 4, 5, 110, 11, 12, 13, 131; crow or raven: 8, 31, 108, 110, 120; tick: 14; cow: 163; snake: 4, 5, 131; flamingo (different states): 13, 26 (2), 29, 31 (3), 32, 34 (2), 36 (2), 46, 48, 69 (2), 84 (3), 101 (2), 108, 117 (1), 121 92), 137, 139, 156 (2); fly: 14; ant: 8; mouse: 131; centipede: 5.

Two bushes are curvally illustrated seemingly owing to the fact that the copyist had tentatively left some lines blank to be used by the illustrator, but the blank space had been insufficient for the illustrations and he had to illustrate the two bushes curvally, dissimilar to other illustra-

tions, and he had to use the remaining insufficient space to write the caption. Such inconsistencies include the illustration of the chestnut tree on page 69, whereas its description is to be found on page 50.

Some headgear, resembling turbans and shawls – uncommon in Persian illustrations – is seen on the heads of people. Further, people wear their hair long in these illustrations. These two points may serve as specific criteria in locating the place of illustration.

I express my gratitude to Mr. Nādir Muṭṭalibī Kāshānī, the editor-in-chief of the *Nāmih-yi Bahāristān*, for proofreading the text of the article in my absence and adding the required sources and notes.

Tehran

10 Dey 1384/31 December 2005

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NOTES

¹ This article was written as an introduction to the facsimile edition of the manuscript; however, since the book will be published on demand, the late Prof. Afshar sent it to the *Nāma-yi Bahāristān* (vol. 12, nos. 18-19, 2011-1012, pp. 75-92) to make it available to the interested readership.

² Mullā Muḥammad Ismā'īl et al, 1377/1998, p. 764.

³ Baṣṭāmī, 1315/1897 (without pagination), four pages to the end of the book.

⁴ 'Iṣmād al-Salṭana, 1315/1897, vol. 2, p. 784.

⁵ Uktā'ī, 1305 AHS/1926, pp. 283-284.

⁶ Bīnīsh, 1336 AHS/1957, pp. 58-66.

⁷ Najmābādī, 1339 AHS/1960, pp. 188-189, 390.

⁸ Sezgin, 1970, vol. 3, p. 285.

⁹ For further details on the number of the folios, see below.

¹⁰ This date is inaccurate, since as will be discussed above, the manuscript had been presented to the royal collection of a Mamlūk in Egypt who had reigned between the years 743/1342 and 746/1345.

¹¹ Muḥaqqiq, 1349 AHS/1970, p. 131, no. 183.

¹² Muḥaqqiq, 1349 AHS/1970, pp. 131-133; idem, 1355 AHS/1976, pp. 98-100; Ghaḍanfar Tabrizī, 1366 AHS/1987, pp. 57, 154-155.

¹³ Nīshābūrī, 1333 AHS/1954, p. 50.

¹⁴ Bīrūnī, 1374 AHS/1995, pp. 147, 357.

¹⁵ 'Irfānīyān, 1380 AHS/2001, pp. 683-687, under no. 499 of the manuscripts on medicine.

¹⁶ Muḥaqqiq, *Bīst Guftār*, Tehran 1355 AHS/1976, pp. 98-100; idem, *Phīlsūf-i Rayy* (The Philosopher from Rayy), Tehran 1349 AHS/1970, pp. 131-136; Adhkā'ī, 1382 AHS/2003, pp. 289-290.

¹⁷ The slash marks indicate the end of lines.

¹⁸ Muḥammad is added in another ink.

¹⁹ Muḥammad is added in a smaller hand.

²⁰ Al-Bīrūnī, 1374 AHS/1995, pp. 147, 357.

²¹ Ibn Abī Uṣaybi'a, 1956, vol. 2, p. 355.

²² 'Irfānīyān, 1380 AHS/2001, p. 683.

²³ All the headings have been assumed as such by 'Irfānīyān.

²⁴ The word "Muḥammad" is written smaller than other words.

²⁵ The word "Māzandarān" is not legible in the coloured as well as the black and white photos available to me. Dr. Aḥmadīnasab (from the Museum of the History of Medicine) was requested to ask the staff at the manuscripts collection of the Āstān-i Quds to make an attempt at reading the illegible word and "Māzandarān" is Mr. Fāḍil Hāshimī's reading. Assuming the reliability of the dedication of the book to a ruler of Māzandarān, a Bāwandid ruler could have been the dedicatee of the book and he must be Shirwīn ibn Rustam who acceded to the throne in 282/895 and reigned until 318/930, when he was succeeded by Shariyār ibn Shirwīn and the former naturally reigned in Māzandarān.

²⁶ For further details, see Afshar, 1380 AHS/2001.

²⁷ All the seal impressions are not legible.

²⁸ All dated collation notes are mentioned by 'Irfāniyān to be nine in number.

²⁹ A word with no dots resembling *gharība* غريبة .

³⁰ Confusions are noticed herein.

³¹ Sic, rather than *Sulaymān-sha'n* (Sulaymān's peer).

³² Sic, in lieu of the attribute *ḥayd-āthār* (generously offering), which was popular since the Ṣafavid times.

³³ Mudarris Raḍawī, 1378 AHS/1999, p. 154.

³⁴ Also see Sālik Birjandī, 1384 AHS/2005, pp. 72-103.

³⁵ It must be a typing error for, or a misreading of, *quththā* قُثْثَا, see above. Translator's note).

Planning a University Course (MSc.) in Manuscriptology

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SECTION I: GENERALITIES

INTRODUCTION

MANUSCRIPTS ARE KNOWN as a chronogram for research, in order to study the history of civilization, science, art and industry of nations. The physical production of a book, in the handwritten format, by the scientists of manuscripts in each country and area, implies for both scientific and cultural reasons the history of different sciences for each ethnicity and nation. By respecting the advent and development of workshops for hand-made papers and also the making of wooden paper and leader bindings by book makers¹, the history of these industries and arts can be evaluated through the manuscripts. Also, with the advent of calligraphy, orthography, ornamentations, and decorations and by using these arts in manuscripts, the study of these precious art books that have been produced can help us find the history of art and its position in nations' civilization. As for the role of Iranians – after the emergence of Islam in this country – in producing and developing science from the second century of Hijrah along with the production of paper in Samarqand, Bukhara and its development in other lands and the emergence of great Iranian scientists in Islamic countries, who have written numerous scientific works, especially from the fourth century

on, as well as the emergence of calligraphy and creation of decorations and ornamentations for the Qur'an, in addition to the great poets of Diwans, from the fifth century on, it can be said that the Iranians have had a special position among Muslims in book-making² and illumination³ of Persian and Arabic manuscripts.

It is necessary, therefore, to protect and preserve these valuable resources well, so that researchers can use these historical precious documents in their various fields of study. Obviously, with respect and due deference to the numerous manuscripts existing in Iran, experts were traditionally educated in the subject of manuscriptology under a system of master and disciple.

However, this is fast eroding today. Firstly, because the apprentice system is now archaic for younger generations and secondly because a lack of university courses related to manuscriptology means we are failing to produce graduates with the necessary skills. With an aging faculty of great Iranian professors, that is manuscriptologists,⁴ compounding matters, it is vital that a university MSc. (Master of Science) is established in order to continue producing experts and manuscriptologists in a country which has hitherto held a high reputation with regards to the production of manuscripts. There currently exist around 300,000 manuscripts in Iran yet more than half have not been catalogued. Similarly, there also exist a large number of Persian manuscripts in India, Pakistan, Central Asia and Turkey with most remaining uncatalogued, due to a lack of cataloguers. This is good reason for placing emphasis on the necessity of training manuscriptologists at universities to produce graduates with the skills necessary.

2. STRUCTURE OF PROPOSED COURSE

| | |
|-------------------------|----------------------------------|
| Length of each period | : 30 months or 5 semesters |
| Length of each semester | : 18 study weeks |
| Each unit of lesson | : 17 hours in a semester |
| System | : unit |
| Number of total units | : 32 theory units consisting of: |
| Main lessons | : 8 units |
| Special lessons | : 20 units |

Selected lessons : 4 units
Total : 32 units

| Title | | Manuscriptology of Manuscripts |
|-----------------------------------|---|---|
| Degree | Master of Science | |
| Courses related to a BSc. degree. | Arabic language and literature, Persian language and literature, library and information science, different fields of Islamic science and culture | |
| Main location | College | National Library with the collaboration of Tehran University or Shahid Beheshti University or Allame University |
| | Department | A Department of library science and manuscriptology in a national library with the collaboration of departments of Arabic language and Literature and Islamic Science and Culture at universities |
| First host | College | Library and Information Science |
| | Department | Library and Information Science |
| Second host | College | Humanities |
| | Department | Arabic Language and Literature |
| Third host | College | Islamic Science and Culture |
| | Department | Jurisprudence and Islamic Law, Qur'anic Sciences and Hadith, Philosophy, Theology and Mysticism |

3. KNOWING ABOUT THE COURSE OF MANUSCRIPTOLOGY (MANUSCRIPTS)

This course includes four parts:

- 1) Manuscriptology
- 2) Bibliography
- 3) Cataloguing
- 4) Preservation, Maintenance and Restoration

In order to study and understand these four elements, first a definition of Manuscriptology and Bibliography is presented which takes into account the necessity of recognition and introduction of Manuscripts through catalogues, as stated in the two parts of Bibliography and

Manuscriptology, which are the basis for cataloguing the manuscripts. Following this, concerning the position of manuscripts in the cultural and scientific history of Iran, the necessity of preserving and maintaining are discussed through academic courses.

Introduction of Quadruplet Parts

Introduction: Definition of Manuscripts

Formerly, a manuscript copy meant the transcription of a book or the writing of it. A manuscript can be defined idiomatically as a document consisting of papers containing some hand-written information in ink and pen, with the papers joined to each other from one side, gathered between covers to the outside edge by way of a spine (Mayel Herevy, 2001, 25) This hand-written document might have been produced by the author or one of his students, or written by a scribe or a scholar following the author's death.

Prior to the age of print, manuscripts were commonly produced in Iran and other Muslim countries.

1. Manuscriptology

In its broadest sense, Manuscriptology is a branch of study which refers to any skill and knowledge through which manuscripts are introduced and described from different aspects. A manuscriptologist is an expert who can describe manuscripts, recognise their content, as well as identify features such as type of script, kind of paper used, the history of transcription, ornamentations and other material and physical characteristics peculiar to a manuscript. The general usage of the word "manuscriptology" is related to this definition.

Manuscript cataloguers believe that Manuscriptology consists of the apparent and physical parts of a manuscript and moreover that it has experimental (Azimi 2008, 134) and practical aspects. In fact, numerous copies of a special manuscript can provide various levels of information such as type of volume and paper used, type of script, the history and place of encasing, the scribe, the number of papers, margins, collation, edition and back page notes. Thus, according to the above definition, each copy of a manuscript is governed by its own manuscriptologic features and no two manuscripts will ever be the same in terms of

their manuscriptologic information. The provisional policy of great libraries with regards to numerous copies of a special title is exactly applied to this definition because the differences in each document's manuscriptologic features with that of the other, constitutes a good subject for researchers.

2. Bibliography of Manuscripts

Bibliography in its broadest sense means the knowledge of recognition of the content of a book. A bibliographer is one who has knowledge of the content, subject and chapters of a book in addition to the title and author of each manuscript. The bibliographer also knows the role of the manuscript in scientific history and the position of the author among the specialists of that subject. Cataloguers of manuscripts believe that bibliography is the first principle for introducing a manuscript including its content and information such as title, author or authors, topic, language, table of contents and sections, whereas incipit and explicit are fixed, clearly and distinctively in a special title of a manuscript (Vafadar Moradi, 2000, 16). According to this definition, numerous manuscripts with a specific title consist of single bibliographic information which cataloguers of manuscripts access by studying and surveying the manuscript's content and examining biographic sources. Taking into consideration the fact that a large number of manuscripts miss incipit and explicit, discovering a manuscript's author as well as title, is a difficult task; and this prevents the cataloguer from having access to this kind of bibliographic information, although through a thorough study of the manuscript and by comparing it with other similar manuscripts from different sources, a solution can be found.

3. Cataloguing

Although manuscripts should be preserved and maintained in the best way, due to their preciousness and antiquity, they should also be accessible to researchers in order to conduct research on their different aspects, as well as to everyone, in the format of a corrected and edited print. Thereby, the content of this valuable historical and scientific heritage is transferred to a contemporary readership by scientific experts

and scholars. Undoubtedly, the first and the most basic step in reviving manuscripts, is introducing them through catalogues. Thus, the cataloguing of manuscripts constitutes a fundamental research.

Cataloguing of manuscripts is an activity which presents relatively comprehensive information in two parts: bibliography and manuscriptology of manuscripts. Researchers are able to gain access to a large number of manuscripts through manuscript catalogues allowing them to conduct valuable research by using them (Azimi, 2007, 1255).

The first samples of cataloguing manuscripts, in its current style, was prepared for manuscripts and printed books at Astan Qods library in 1926. Then, two other volumes were added to the primitive catalogue with all of them having a special style for introducing manuscripts in terms of bibliography and manuscriptology (Vafadar Moradi, 2000, 11). These catalogues have been the first complete catalogue of a library printed in Iran.

Following these volumes, other professors and cataloguers prepared and compiled numerous catalogues for great libraries in Iran such as Astan Qods Razavi, Ayat Ul-llah Najafi Mar'ashi, National library, University of Tehran, Malek, School of Sepahsalar and Ayat Ul-llah Golpayegani.

The manuscripts' cataloguers have paid attention to two principles of bibliography and manuscriptology in order to prepare their catalogues. They have compiled the manuscript catalogues according to these two principles i.e. fixed and defined information of the special title of a manuscript which topic and content fall into the bibliography section, and changing information of the special title of a manuscript which consists of the appearance and physical parts of the copy, included in the manuscriptology section (Azimi, 2007, 1255).

The most compiled catalogues of manuscripts in Iran are prepared in the same style but with some difference in details or synopsis of information registered by the cataloguer, both in bibliography and manuscriptology. Some cataloguers paid more attention to the information of the bibliographic part and introduced this part of the manuscript in more detail. Some others stated the bibliographic information in brief and the manuscriptologic information in detail. The third group presented all information related to a manuscript in detail, in addition to paying

attention to both parts. A large number of the manuscript catalogues of India, Pakistan, Turkey, Central Asia, and Arab countries have been organised in this style, but in almost all of these catalogues, manuscriptologic information related to a special manuscript has been comprehensively presented.

A few manuscript catalogues available in European libraries have been compiled in the style of catalogues of printed books, namely consisting of two parts of descriptive and analytical cataloging. The descriptive part includes the title, date, edition, description of manuscripts' appearance and notes. The analytical part implies, on the other hand, the importance of using subject headings and entry name authority form from the control system (Previous, 1256).

Today in Iran with the advancement of new technologies and designing new and comprehensive library applications, manuscripts' cataloguing is done in some libraries, such as the national library according to Iran MARC, in different areas of descriptive manuscriptology as well as analytical bibliography.

4. Preservation, Maintenance and Restoration

Manuscripts are considered precious books in libraries, because of their antiquity, uniqueness and artistic aspects. They are preserved in separate collections, as in old times when they were preserved in royal libraries or given to special people. Usually, old manuscripts become worn and fragile, ravaged by mildew, insects, radiation, and humidity. Even some parts of the folios are destroyed or become missing or separated. Whether in isolation or part of the whole, each folio of a manuscript is valuable and unique. Manuscripts should be preserved in special stacks and many need to be restored (repaired). Accurate restoration, correct preservation and maintenance of manuscripts is essential and can be achieved through monitoring correct air conditioning, temperature, humidity and light. This prevents any inevitable deterioration (Niknam, 2002, 35).

It is imperative that this invaluable heritage is preserved not only from possible mildew but also other dangers. This can be done through different kinds of practical and scientific activities. The most obvious are:

- Disinfestation and restoration of deteriorated and damaged manuscripts in libraries.

- Preserving manuscripts held in individual or family libraries which are normally found in the worst condition. The best way is to donate or even loan them to well-equipped libraries to be safely preserved. Undoubtedly, great libraries can help with the disinfestation and restoration of such personal collections.

- Transferring manuscript images to microfilm and preparing long lasting backup copies.

- Applying new digital technology and high resolution imaging to scan books saving them in digital format, in order to present them to clients in compact electronic form.

- Note manuscripts should only be scanned once (especially precious and unique works), because with the passing of time, a large number of the folios become torn or damaged. Furthermore, the ink fades and the papers separate. Scanning can cause more damage.

- Preservation of manuscripts by dealers who see them as antiques and collect them for academic and research centres for use in research and scientific purposes.

- Establishing and developing a digital library of manuscripts which can then be made available in great libraries such as in Iran, India, Pakistan, Turkey, Central Asia, Egypt, Sudan, Yemen as well as in Europe and the West. Giving researchers throughout the world easy access to the manuscripts through these libraries via the Internet.

Numerous Islamic Manuscripts in the World

Concerning the changes that each of the transcript centres (Diwani, scientists, bookmakers and calligraphers) have had in different periods, the outcome of their efforts is the existence of millions of Persian and Arabic manuscripts, now preserved in public and special libraries all over the world or displayed in museums.

Most of these manuscripts have been compiled by Iranian scientists in Persian and Arabic and their reproduction has been mainly performed in transcript centres of Iranian local Diwans or by non-Diwan scribes and calligraphers in different cities of Iran, India, Transoxiana, and Anatolia, with a few of them, by scientists and researchers.

Containing a citation to authors, scribes, and the place of transcription of these manuscripts, we can state that the contribution of Iranian scholars, directly or indirectly to the production and reproduction of Persian and Arabic manuscripts, is more than other nations and cultures. In addition, because of this illuminationists', calligraphers and book makers across the vast land of Iran, from the 7th to the 13th century, have had an effective role in producing manuscripts. Topics of manuscriptology such as ornamentation, illumination, calligraphy and production of different kinds of hand-made papers have been more prevalent among Iranian artists than those of other nations (Mayel Heravi, 2001, 365).

The Role and Position of Scholars and Librarians in Relation to the Heritage of the Deceased

Undoubtedly, manuscripts are the scientific heritage of ancestors which indicate the history of different sciences in successive centuries. The subjects of each science and its historical evolution are part of the culture and civilisation of each nation, whereas the methods of illumination and making paper, cover, and ink, are parts of the industry and art of people in each country. The role of Iranians in culture, civilization, industry, art and the mass production of Persian manuscripts in successive centuries, indicates the prosperity of these people.

The existence of millions of Persian manuscripts all across the world is a matter of great pride for the Iranian people. However, we need to ask ourselves, is it necessary to do our best to preserve, maintain, introduce and revive this valuable heritage? The response comes in the form of a review on the necessity of great effort in the field of manuscripts (Hadi Nahr, 2005, 199). The large number of manuscripts in different areas and locations need the following actions to be taken.

Preservation and Maintenance

The antiquity of manuscripts is related to the history of their production from the 3rd and 4th century to the 13th and 14th century. Each item involved in the illumination of manuscripts, such as paper, ink, cover and binding, become worn over time. Thus, first it is necessary to preserve manuscripts under appropriate conditions, i.e. under a standard

temperature, with lack of humidity etc. and secondly some action needs to be taken with respect to damaged manuscripts or whose paper is close to disintegrating. Steps which can be taken are:

Disinfestation

Before doing anything, it is necessary to disinfect manuscripts with appropriate chemical gases and materials. This allows all kinds of mildew, mold, animal elements and insects to be removed, increasing the resistance and insolubility of the paper (Niknam, 2002, 40).

Preparing a back-up copy

It is necessary to prepare a digital copy of each manuscript as a back-up. Imaging the manuscripts onto microfilm and all other forms of scanning and electronic preservation and copy are good efforts. Storing digital copies and organising them in digital memories and finally, establishing a digital library of manuscripts is inevitable, allowing for easy information retrieval.

Restoration and binding

Manuscripts with damaged covers, binding or paper should be restored. Restoration of the text and margins of damaged paper should be done using the following approaches:

- Scientific, technical and exact restoration of each paper of important and unique manuscripts.
- General restoration for common books. Also, planned and executed should be completing the binding of papers and the restoration of damaged covers (Foad, sayyed, 1997, 543).

Providing appropriate conditions for preservation

After restoration and disinfestation, manuscripts should be preserved under certain conditions, to first ensure that no microbes and damage remain and secondly that there is no possibility for microbes to grow, this is in order to make the paper and cover more resistant in that environment. So, repositories of stored manuscripts should be periodically disinfected, using appropriate gases, the temperature should be in the range of 19-21 degrees centigrade, and the rate of humidity, should be regularly controlled (between 50-60 %) (Adcock, 1998, 45).

Research and study

Concerning the development of science and the advancement of technology and the discovery of new tools, further research and study on preservation and the procedures mentioned above should be conducted to keep abreast of the latest techniques. For instance, studying and researching new methods for combating biological factors damaging manuscripts, such as using nano-technology, finding new ways of producing digital copy, of digital/electronic storage, studying environmental factors for preservation using new technologies etc.

Introduction and Cataloguing of Manuscripts

Preservation and maintenance of manuscripts means protecting research and scientific material which should be introduced and used by researchers. Therefore, manuscripts should be introduced through catalogues. Because cataloguing manuscripts is considered to be research work and the number of manuscript catalogues is low, we should think of an appropriate approach for non-catalogued and introduced manuscripts, whose number is high.

Manuscripts are catalogued in two stages using two methods

1. Cataloguing involving preparing a brief list with descriptive information. In some cases accessing an experienced and practiced cataloguer is difficult. To overcome this there is an option for a primary catalogue to be prepared, especially in far regions, by educating several researchers. This will allow for each manuscript to be registered and primitive descriptive information to be made available to researchers (Foad, Sayyed, 1997, 543).

2. Preparing a complete and detailed catalogue. Where experienced cataloguers are available, it is necessary to compile complete analytical and descriptive information of a manuscript. By this is meant the bibliography and manuscriptology in the format of manuscripts' catalogues. The compilation and publication of a manuscript catalogue, offers an opportunity for researching different aspects. Topical and content evaluation of manuscripts according to subject, author and even language and also some other aspects, like technique of paper production, making types of covers, emerging types of scripts, evolution of scripts,

origination of ornaments' kinds, ornamentations and their evolution in different centuries, transcription of manuscripts in different regions and the emergence of numerous scribes, all allow scope for research and study. Researchers can conduct great research and useful surveys on catalogues of manuscripts.

Unification of cataloguing procedure

It is necessary to define a unique and standard method for both two stages of compiling a brief and detailed catalogue, so that the published information and the learning procedure of these kinds of catalogues will be easier for beginners. Secondly, the publication of detailed catalogues in two parts, bibliography and manuscriptology, will enable whole unique and useful information to be provided and made available through different libraries. Thus, through a unified procedure in place, we achieve a method of standard cataloguing allowing opportunity for provision of databanks and unified catalogue (Azimi, 2002, 167).

Provision of manuscripts' databanks

Regarding the dispersal of manuscripts in different libraries, the publication of two kinds of brief and detailed catalogues in outmost ones, definitely causes problems for researchers in accessing each of those catalogues. It is essential therefore that databases and databanks of manuscripts are developed so that researchers can easily access the information of dispersal manuscripts. Naturally in the next stage the establishment of a digital library of manuscripts at both regional, national and international levels would be an ideal step, with each library doing its best to play an important role in this. To achieve this, conducting research is necessary.

Educating Experts

Regarding that there is no university course in the field of manuscriptology of manuscripts and also concerning educating experts of this field through method of master and disciple, it is necessary to educate and train experts of manuscripts in different aspects like preservation, maintenance, cataloguing and information.

Planning short-time educational courses and establishing higher education at universities are good solutions to train experts in the field

of manuscripts. At this stage, it is good to train a number of experts and send them to certain countries such as Turkey, Pakistan, India and Central Asia. Although a large number of Persian manuscripts exist in these countries, there are no experts in manuscripts to work with them. Furthermore the condition of their preservation and maintenance is inappropriate with a large number facing damage and ruin as a result. Thus, the need for educating and training experts is vital.

Establishing a University Manuscriptology Course

Regarding Iranian expertise in both producing manuscripts and efforts in their preservation and maintenance, as well as their work in the introduction, cataloguing and revival of manuscripts and taking into consideration all the necessary aspects related to manuscripts, there is a need to think deeper. We need to determine the role each one of us as Iranians, our great libraries, research and educational institutes, cataloguers and experts in the fields of preservation, can play in the introduction, cataloguing and revival of scientific old texts.

If we have not done our utmost in this regard, we should try harder. It is a race against time, otherwise, soon, the opportunities will be lost. So, planning an educational course in the form of an MSc. (Master of Science) and establishing this course at universities is an important step and a suggestion which should be given serious attention.

The history of manuscriptology education

Education on manuscriptology at universities, research centres and great libraries is presented in different ways. The most important of them are:

One-unit and two-unit lessons. First a lesson entitled "manuscripts and rare books" was held in 1971 at the department of Library and Information Science at Tehran University. Its topics included a brief introduction to manuscripts, and methods of preservation, maintenance, and binding. Following this, a two-unit lesson of manuscriptology was approved in 1986, by the planning council. In this year a more comprehensive programme for manuscripts, in the form of an MSc. was compiled. Thereby the two-unit lesson of manuscriptology for the library science course was presented at universities.

Formal course equal to MSc.

In 1989, Tehran University presented an MSc. course on manuscripts, with the effort of Professor Muhammad Taghi Daneshpazhuh, which included 68 units. This course lasted from 1990 until 1993. In total, 13 experts were trained in this period and some professors like Iraj Afshar, Ali Naghi Monzavi (PhD), the late Muhammad Taghi Daneshpazhuh, Mahdi Mohaghegh (PhD), Abbas Horri (PhD) and Noosh Afarin Ansari (PhD) taught the course (*Should and Shouldn't*, 2003, 99-102).

Educational period of BSc. (Bachelor of Science)

In the national library of Iran, from 2005 until 2007, a first two-unit educational period (34 hours) under the title "introduction to manuscripts" was held for training librarians of the national library. The course was held for 3 periods and some general topics of manuscriptology and cataloguing of manuscripts were taught by me (the author of this paper). Then two other units under the title "cataloguing of manuscripts" were presented and they included theory and practical education.

Educational workshop

Since 1991, numerous workshops have been held i.e.: 1- The workshop of Shahid Motahari's library: given by Professors such as Mohit Tabataba'i, Professor Ha'eri and Abd Allah Nourani. 2- The Library of Astan Qods presented by Professors of library science in 1992. Several educational workshops (5 periods) in the national library for experts and cataloguers of manuscripts have been held in 2008 and in recent years, presented by Iranian Professors such as Professor Anvar, Mahdi Mohaghegh PhD, myself and Muhammad Vafadar Moradi and foreign Professors such as Professor Richard from France, Professor Withkam from Leiden, the Netherlands, Aref Noshahi (PhD) from Pakistan, Professor Karim F. from Tajikistan.

In addition, in February 2008 a three-day workshop was presented for Professors and students of higher education in the Persian language and literature in India. I gave the presentation at the invitation of Aligarh with the effort of the Persian research centre in Delhi.

Suggestions and Solutions

1. Compilation of an MSc. with determined topics according to the standards of the Ministry of Science. I have produced a research proposal in this field and the report of this project is about to be published.
2. Compiling scientific resources as the basis of teaching manuscriptology in the form of scientific articles, books and pamphlets.
3. Collecting separate articles related to the topic of manuscriptology in different specialised journals or international seminars on manuscripts.
4. Interaction with professors of the departments of Library and Information Science, Persian and Arabic literature, Theology and Islamic art as well as professors of manuscriptology, in order to present a suggested applied curriculum outline.
5. Collecting contents of workshops audio-visually and presenting them in an educational package in CD's or online in a database of manuscriptology.

Requirements

1. Training experts in manuscriptology is necessary because of the large number of manuscripts existing in different geographical locations.
2. Preservation and revival of old written works is an essential duty of contemporary researchers. An important element of this task relies on the introduction and identification of unknown and non-catalogued manuscripts.
3. A large number of manuscripts both in Iran and across the world exist which have not yet been catalogued and which are disappearing gradually.
4. After Iran, countries such as Turkey, India, Pakistan and Central Asia host the biggest collections of Persian manuscripts. However, the number of manuscript cataloguers in these countries is limited with only a few knowing Persian. Therefore, it behoves Iranians to train cataloguers in the Persian language.
5. Taking into account the fact that worldwide about a half of available manuscripts are in Persian with another half in Arabic and that a

large number of the producers of Arabic and Islamic manuscripts are Iranian scholars with no serious effort made in the Arab world for training cataloguers of manuscripts, it also becomes incumbent on Iranians to educate Arabic cataloguers.

6. As most Iranian scholars of cataloguing as well as manuscriptologists (and the same is also true of other countries) are elderly and have not trained students, it is essential to begin training of cataloguers before the scholars pass away.

7. Until now, at both universities and higher education centres, a specific course on manuscriptology has not been established (except during a period planned by the central library of Tehran University).

8. Valid, comprehensive and scientific resources for the topics of manuscriptology, cataloguing, preservation and maintenance of manuscripts have not yet been compiled. (Aside from a number of limited books and some articles presented in different journals or in seminars).

9. Great Iranian libraries still have a large number of manuscripts which remain uncatalogued and which are continuously added to in their number. Therefore, they need to train experts who have a university specialisation. This is needed more in libraries of other countries.

Objectives

1. To educate specialised manuscriptologists with academic and systematic methods within and outside the country.

2. To record the experience of manuscriptologists and cataloguers as systematic scientific and educational topics.

3. To develop an education of manuscriptology by holding specialised courses and compiling university books.

4. To develop scientific manuscriptology skills by holding educational workshops and organising practical work.

5. To develop scientific topics of manuscriptology through the writing of dissertations.

6. To identify, edit and search important manuscripts through dissertations.

7. To organise and develop knowledge of manuscripts and new written documents.

8. To provide experts to libraries and academic research centres in the country.

9. To complete and develop manuscript databases and electronic libraries.

10. To record the history of cataloguing, the methods of great scholars of manuscriptology and the changes which have occurred in cataloguing methods.

11. To compile university and scientific books on manuscriptology and the scientific development of this course.

12. To teach standard methods of preservation, maintenance and restoration of manuscripts in libraries and individual collections.

Principles and Criteria of the Programme

1. This programme should apply the teachings of library and information science accompanied by the experiences of professors of manuscriptology.

2. In this course, which is an interdisciplinary one, the experiences of professors, cataloguers and related experts should be employed.

3. The programme should have the capability to use appropriately units from the specialisations of library and information science, Arabic language and literature, Persian language and literature, Islamic science and culture, art and other related courses.

4. The programme should be planned in accordance with new technologies, as well as the history of this course at universities and the needs of libraries inside and outside the country.

5. The programme will take into serious consideration research aspects, practical work and increasing skills and experiences, in addition to other theoretical discussions.

Conditions of Admission

1. Conditions of admission to the course are the same as those related to article 2 of the second chapter of the MSc. regulations approved in the 291st session of the planning high council in 1994, in the Ministry of Culture and higher education magazine no. 134 (ministry of science, research and technology) and as stated it is important that the students are interested in the course.

2. Priority is given to those holding a BSc. in Library and Information Science, Persian Language and Literature, Arabic Language and Literature, Islamic Science and Culture, Iranology, and Orientalism, approved by the Ministry of Science, Research and Technology.

Note: Foreign students will be able to participate in the course if they possess qualifications in accordance with point 2 above, pass pre-requisite lessons and learn the Persian language (through one of the valid centres of the Ministry of Science, Research and Technology).

Features of the Course

1. This course is interdisciplinary and completely related to some courses in the field of humanities such as Arabic Language and Literature, Persian Language and Literature, Islamic Science and Culture, Library and Information Science.

2. In this course, researchers will be trained at international, national and regional levels and conduct research in the fields of manuscriptology, cataloguing of manuscripts, Iranology and Islamic Studies.

3. It is possible for students of this course to continue their studies in the fields of library and information science, Persian language and literature, Iranology and Islamic Studies, while there is an opportunity to establish a PhD degree for this course.

Required Specializations

1. PhD in Persian Literature and Language
2. PhD in Library and Information Science
3. PhD in Arabic Literature and Language
4. PhD in different fields of Islamic Science and Culture

THE SECOND CHAPTER
TABLES OF PROGRAMS AND TITLE OF COURSES

1. Table of prerequisites units of the course

| Code of the lesson | Name of the lesson | Number of units | Hour Theory | Practical | Total | Group of Presented Course | Fields of M. S course which the students do not need to pass prerequisite lessons |
|--------------------|--|-----------------|-------------|-----------|------------|---|---|
| 1 | Arabic language (review of grammar) | 3 | 51 | | 51 | Arabic literature | BSc. in Islamic science and culture, Persian Literature and Arabic Literature |
| 2 | Arabic language (texts of Arabic reference sources) | 3 | 51 | | 51 | Arabic literature | Arabic literature |
| 3 | History of Islamic Sciences and its Fields (Jurisprudence, Principles, rules of Jurisprudence) | 2 | 34 | | 34 | Theology-group of Jurisprudence and Islamic law | BSc. in Islamic science and culture, field of Jurisprudence and Islamic law |
| 4 | Research methodology and bibliography in humanities | 2 | 34 | | 34 | Library and Information science | Library and Information Science |
| 5 | History and topics of Islamic sciences (Qur'anic sciences and Hadith) | 2 | 34 | | 34 | Theology, group of Qur'anic sciences | BSc. In Islamic science and culture field of Qur'anic sciences |
| 6 | History and topics of Islamic sciences (Theology, philosophy and Mysticism) | 2 | 34 | | 34 | Theology | BSc. in Islamic science and culture field of Theology and Islamic philosophy |
| 7 | Introduction to Persian order and prose | 2 | 34 | | 34 | Persian literature and language | BA in Persian Literature and Language |
| Total | | 16 | 272 | | 272 | | |

Each student who can gain 70% of the grade of each of the prerequisite lesson in the primary exam does not need to pass the lesson.

2. Table of the main lessons

| Code of the lesson | Name of the lesson | Number of units | Hour Theory | Practical | Total | Prerequisites | Time of presentation |
|--------------------|---|-----------------|-------------|-----------|------------|---------------|-------------------------------|
| 8 | Special text in Arabic | 2 | 34 | | 34 | | First year First Semester |
| 9 | Research method and bibliography in manuscripts | 2 | 34 | | 34 | | First year Second Semester |
| 10 | Dissertation | 4 | | | 68 | | Third year |
| Total | | 8 | | | 136 | | |

3. Table of special lessons

| Code of the lesson | Name of the lesson | Number of units | Hour Theory | Practical | Total | Prerequisites | Time of Presentation |
|--------------------|--|-----------------|-------------|-----------|-------|---------------|----------------------|
| 11 | Manuscriptology (1) | 2 | 34 | | 34 | | First semester |
| 12 | Manuscriptology (2) | 2 | 28 | 6 | 34 | | First semester |
| 13 | Bibliography of manuscripts | 2 | 17 | 17 | 34 | | Second semester |
| 14 | Cataloguing of manuscripts | 2 | 17 | 17 | 34 | | Second semester |
| 15 | Introduction to manuscript cataloguers and evaluating methods of cataloguing | 2 | 34 | | 34 | | Third semester |

| | | | | | | |
|--------------|--|----|----|----|-----|-----------------|
| 16 | Introduction to databases of manuscripts and catalogues outside the country | 2 | 17 | 17 | 34 | Second semester |
| 17 | Arabic texts in manuscripts (sermons, headings and colophons in manuscripts) | 2 | 34 | | 34 | Third semester |
| 18 | Cataloguing workshop (1) | 2 | | 34 | 34 | Fourth semester |
| 19 | Preservation and maintenance of manuscripts | 2 | | 34 | 34 | Second semester |
| 20 | Cataloguing workshop based on MARC (2) | 2 | 10 | 24 | 34 | Fourth semester |
| Total | | 20 | | | 340 | |

4. Table of the main lessons

| Code of the lesson | Name of the lesson | Number of units | Hour Theory | Practical | Total | Prerequisites | Time of presentation |
|--------------------|---|-----------------|-------------|-----------|-------|---------------|---------------------------|
| 21 | Manuscripts in Islamic world | 2 | 34 | | 34 | | Second Semester |
| 22 | History of compiling sciences in Islam and Iran | 2 | 34 | | 34 | | First Semester |
| 23 | Introduction to Turkish and Urdu languages in manuscripts | 2 | 34 | | 34 | | Second and third Semester |
| 24 | Lithography and rare books | 2 | 34 | | 34 | | Second Semester |
| 25 | Textology | 2 | 34 | | 34 | | Second Semester |
| Total | | 10 | | | 170 | | |

The student should select 4 units from the list of suggested lessons in the table.

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NOTES

- ¹ Producers of manuscripts.
- ² Production of manuscripts.
- ³ The art of manuscript decoration.
- ⁴ Experts in manuscripts.
- ⁵ A person who does manuscript decoration.

Of Volume and Skins: The Qur'anic Manuscripts of al-Mahdi

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LARGE COPIES were by no means uncommon at an early date. In addition to a saying attributed to caliph 'Umar who expressed his dislike of small copies (Ibn Abī Dā'ūd 2002, 136; Abbott 1939, 54), extant evidence points to an early tradition of huge Qur'anic manuscripts. A now famous example is the Umayyad fragment Sanaa, DaM 20-33.1 (von Bothmer 1987). It has been argued by Hans-Caspar von Bothmer that the $44 \times 36,5$ cm folios of the manuscript measured originally 51×47 cm. A C14 dating of the parchment indicated that it was produced during the years 657-690 although a slightly later date during the reign of al-Walīd (reigns between 86/705 and 96/715) was favoured by the German scholars who published the results of the analysis (von Bothmer, Ohlig and Puin 1999, 45). The text has been written in an impressive script, using a tool with a broad nib, and provided with a vocalisation. The illumination is particularly spectacular.

The vertical format of the Sanaa copy is also found in an unpublished Umayyad Qur'anic manuscript of which a few folios have been sold on the market (two of them being in the Doha Museum of Islamic art'). It is a *folio* codex, measuring 50×43 cm. An unpublished C14 dating of the parchment concluded to a 68% possibility of a date between 656 and 675 and a 95% possibility of a date between 648 and 691, although both the script and the illumination should be dated to the first half of the 8th century. As the Sanaa manuscript, it has 20 lines to the page and

the short vowels are indicated. The illumination is however less magnificent. A fragmentary copy kept in the Chester Beatty library in Dublin suggests that the 20 lines vertical format had some diffusion in Umayyad times. The script is closer to Sanaa, DaM 20-33.1; vowel signs are also present.

Next to these copies, there is a small group of three large Qur'anic manuscripts, all of which share a few material characteristics: they are written on parchment, on large size folios in oblong format, measuring approximately 55 × 65 cm. The text is transcribed in a monumental script, with 12 lines to the page in each case. Short vowels are not indicated. When looking more into detail at the structure of these copies, one notices that the parchment folios have been used in the same way: the recto side of the folios is the flesh side of the parchment. A C14 analysis of the parchment of one of them dated it between 640 and 765 CE, thus suggesting that it might be contemporaneous with the previous examples.

The first copy is the famous Tashkent *muṣḥaf* which has been thoroughly examined by A.F. Shebunin shortly after it had been transferred by Russian authorities from Samarqand to Saint Petersburg in 1869². In addition to the folios which are now in Tashkent, some leaves which were no longer with the manuscript when it was bought by the Russians were recently sold on the market, many of them being acquired by the Doha Museum of Islamic Art³. The Central Asian part of this copy of the Qur'an contains only a portion of the text and Shebunin moreover noted in 1891 that 69 of its 353 folios were paper replacements. A facsimile was published in 1905 by S. Pissaref. The manuscript in its original state was not only impressive for the two-dimensional size of the folios (58 × 68 cm), but also for their number. On the basis of the text found on the folios and on the assumption that the density of the script did not vary considerably, we can estimate that the copy contained about 1000 folios, which means that a herd of 1000 sheep had to be slaughtered in order to get the hides which were turned into parchment. In order to make further comparison with other manuscripts easier, this means that 362 sq.m. of trimmed parchment were required for the production of such an volume. The recto side of the folios is the flesh side of the parchment.

The copyist or copyists in charge of the manuscript were professional, working in difficult conditions due to the size of the folios, with the page certainly held slanting, maybe on some kind of board. This appears especially clearly when one examines the letters, the bottom of which looks darker due to the fact that the ink applied on the parchment drifted down before drying. On the other hand, the broad nib of the writing tool did not always allow the copyist to leave a regular stroke or achieve immediately a satisfactory shape. He had therefore to re-ink the text at some places, a process which in some cases may also have taken place at a later date. When Pissaref prepared the facsimile of the folios in Saint Petersburg, he also had to re-ink some of the folios, which resulted in mistakes that raised a controversy in Muslim circles (Jeffery and Mendelssohn 1942, 176).

According to the rules of this time, the text is evenly distributed on the folio without any distinction between the inter-word spaces and those eventually found within a single word. As a consequence, dividing a word at the end of a line is allowed, but the copyist would avoid breaking a word between two pages. The height of the script combines with the importance given to the horizontal component, underlined by the elongation (*mashq*) (Déroche 1992, 12; another view by Abbott 1939, 24-8)⁴ of the letters *šād*, *ṭā'*, *kāf* and of isolated or final *bā'*, *fā'* and *yā'* (Shebunin 1891, pl. VIII and IX). The latter has actually two or three shapes of which only one lends itself to elongation. In spite of its shape, quite close to that of the *kāf*, the *dāl* is not elongated or only very little. In addition to the application of *mashq* to the body of these letters, their connections can also be extended when required. Exceptionally the horizontal tail of the final *mīm* can also be extended at the end of a line. Shebunin published a plate with a few spectacular examples of a single word occupying a whole line (Shebunin 1891, pl. IX). The copyist also used dashes at the end of the lines in order to produce a regular left hand margin. In some cases, there is actually no room for any letter and the device seems more a matter of aesthetics, but very often it may be quite long, which suggests that the copyist had not planned with much care the distribution of the text.

The illumination which survived consist in ten verses ornaments and surah headbands. The latter seem to rely on the repetition side by side of

a square module with geometric patterns in order to cover the whole length of the space left for this ornament. The former are squares with a four pointed star and a circle in the centre with the number of verses in red *abjad* letters. The colours are red, yellow, blue and green.

The second copy of the group is kept in Cairo, in the Mashhad Husayn. Moritz reproduced a page of the manuscript in his *Arabic palæography* (Moritz 1905, pl. 13, with a detail on pl. 14). Recently, a facsimile with a transcription has been published in Istanbul (Altıkulaç 2009), and although it does not provide any codicological description of the manuscript, the plates sometimes allow to detect a disposition of the parchment sides similar to that of the Tashkent copy. It is not clear whether the 1087 folios are all original or include replacements, as is the case with the former manuscript. Altıkulaç makes no comments on this point, but some of the variations of the script may indicate this. The script is close to that of the Tashkent codex and makes an extensive use of the elongation, with instances of a single word on a line (Altıkulaç 2009, 758 for instance). There also seems to be some relationship between the two manuscripts as far as the ornamentation is concerned. The square decade ornaments include a four pointed star in the centre of which a circle contains a red *abjad* letter. The repetition of a roughly square module in the composition of the surah headbands can be observed on f. 486 v° or 592 r°, for instance (Altıkulaç 2009, 487 or 592). The total number of verses of each (?) surah is apparently indicated after the end of its last verse, as in the Tashkent copy (see for instance f. 400 v° or 451 r°, Altıkulaç 2009, 401 or 451). The facsimile does not allow to decide whether gold was used, but this does not seem to be the case. A quick comparison between the two manuscripts shows that the textual distribution folio by folio is not the same on both, which means that they are not following the same exemplar.

Their date has been under debate. Both are said to be caliph 'Uthman's own copy, but they do not contain any direct evidence as a colophon. Scholars tried to date them through the analysis of their script and orthography. Shebunin suggested dating the Tashkent copy to the 2nd/8th century (Shebunin 1891, 123). Half a century later, working on Pissaref's facsimile, A. Jeffery and I. Mendelsohn carefully evaluated the orthography and the text of the Tashkent manuscript and reached the

conclusion that it could be dated to the 3rd/9th century (Jeffery and Mendelsohn 1942, 195). The editor of the Cairo facsimile, Altıkulaç, submitted the text to close scrutiny and came to the conclusion that, on the basis of traditional Islamic literature on the *rasm* 'uthmānī, the manuscript was by no means a *muṣḥaf* 'Uthmān – a conclusion reached already by Ṣalāḥ al-Dīn al-Munajjid on palaeographical and historical grounds (Munajjid 1972, 50-5; Altıkulaç I 2009, 124-5) – and suggested to date it to the end of the 1st/7th century (Altıkulaç 2009, I, 125). I mentioned above a C 14 analysis of the Tashkent copy parchment which concluded with a 68% possibility of a date between 640 and 765 CE (Christie's, 1992, lots 225 and 225 A).

The third copy, Cairo, Dār al-Kutub 18953, will detain us slightly more. The manuscript was kept in the 'Amr mosque in Fuṣṭāṭ at the beginning of the 19th century when it was first mentioned by a Western traveller, Ulrich Seetzen, who also managed to buy a few leaves which are now in Gotha (Universitäts-und Forschungsbibliothek, MS Orient A 462, with 12 f., see Pertsch 1878, 395-6; Möller 1844, pl. XIV; Nebes 1997). Another European living in Cairo, the French consular agent Jean-Louis Asselin de Cherville, could also acquire some leaves which are now in Paris (Bibliothèque nationale de France, Arabe 324 c¹, with 38 f., see Déroche 1983, 75-7). In 1905, Bernhard Moritz published a selection of pages of the manuscript which had by then been transferred to the Khedivial library (Moritz 1905, pl. 1-12).

The Cairo part of the manuscript has 568 folios of 54 × 62 cm. Shebunin examined it and published in 1902 a study in the same journal where he had previously discussed the Tashkent copy (Shebunin 1902)⁶. As in the latter, only 248 folios may be original, the others belonging to various restorations using either parchment (95 folios) or paper (219 folios) (Shebunin 1902, 120)⁷. The parchment sheets have been piled up in the same position, that is to say with the flesh side as recto as in the Tashkent and Mashhad Husayn copies. Shebunin noted that the folios were not folded like those in Tashkent in order to produce stubs, but that pairs of folios were glued together and then to the back (Shebunin 1891). The ornaments between the surahs draw from a larger repertory, although some of them rely on the same principle as those seen in the Tashkent copy, that of the repetition of a square module. An analysis of

the colours found on the Paris pages gave the following results: lapis has been used for the blue, verdigris for the green, orpiment for the yellow and vermilion for the red (Déroche et al. 2006, 50 and 55)⁸. The script is closer to that of the Mashhad Husayn copy and has been defined as C Ia (Déroche 1983, 39-40 and pl. XII; 1992, 40-41). The strokes are thick, slightly bent to the right as in the early *hijāzī* manuscripts.

The letters are evenly distributed on the page, with the same spacing between the letters or groups of letters, be they part of the same word or not (fig. 16). At the end of a line, the copyist would not hesitate to divide a word where possible and have its beginning on a line and the end on the next one. In some cases, it may be a single letter: on the Paris folio 21b, lines 2 and 4, the isolated final *nūn* of a word is found at the beginning of a line. This method helped the copyist in coping with the distribution of the script on the line and the page, although it did not always avoid having a blank space at the end of a line. In order to get a neat vertical line on the left side of the justification, he could rely on the insertion of horizontal dashes at the end of the lines which could not be entirely filled by the script (fig. 16, l. 3 and 7). Another technique, widely used by the copyists of the Tashkent and Mashhad Husayn copies, was however available to him, the horizontal elongation of some letters or *mashq*. It is actually moderately applied, except by the end of the manuscript, probably to deal with the more frequent occurrences of surah headbands.

On the basis of the amount of text found on the folios kept in Paris, it is possible to estimate the original size of the manuscript. It contained probably about 655 folios, in other words 218 sq.m. of parchment were needed to produce this copy, somewhat less than the other two manuscripts.

The orthography might provide some clues as to the date of the manuscript. A few cases of *scriptio defectiva* (characteristic of the earliest copies, like the *codex Parisino-petropolitanus*, see Déroche 2009, 51) are found in the folios kept in Paris. There is no instance of *qāla* written without *alif* in this copy, but *minas'atahu* (34: 14), *jannat(ā)n* (34: 15), *dhawātay* (34: 16), *lay(ā)lī* (en 34: 18) are still written defectively (Déroche 2009, 60-3). Other traces of old orthography are present: in 5: 10, *bi-āyāt* is written with three denticles instead of two (Déroche 2009,

54-5), in 34: 33 the *alifal-wiqāya* is lacking in the 3rd person of the plural *ra'ū* (Déroche 2009, 64-6), and *dhū* is conversely written with a final *alif* – erased later (Déroche 2009, 65-6). All these elements point to an early orthographic stage, earlier than the end of the 8th century or the very beginning of the 9th century.

The verse division, as it can be analysed on the basis of the Parisian part of the manuscript, does not allow for a definite assessment of the school which was followed by the copyist(s). In a portion of text from s. 35, a verse ending is found after v. 19, 20, 22 and 23: the first two divisions are not attested in the Basran tradition, the third one is not found in the Damascene school and the last one does not appear in Homs (Spitaler 1935, 52; Déroche 2009, 88). This could lead us to conclude that the manuscript was not following any of these three schools. However, there is no verse ending after 35: 16, a peculiarity shared by the Himsian and Basran schools, which contradicts the previous conclusion (Spitaler 1935, 52; Déroche 2009, 88). The same applies to the *basmala* the tradition of which does not count as a verse, except in s. 1. In the manuscript, a verse ending is indicated after the *basmala* in s. 32 (M 3), 44 (G 3b), 45 (G 6b), 46 (G 11a), 47 (C), 49 (C), 60 (C), 66 (C), 67 (C), 69 (P 30a), 70 (P 32a), 71 (P 34b), 72 (P 36b), 75 (P 38a), 76 (P 39b), 96 (P 43a), 107 (P 46b)⁹. Conversely, there is no division after the *basmala* in s. 38 (M 1-2) and 81 (P 42b). In a few cases in the last folios of this manuscript, this opening formula has been written alone on the first line of the surah – see s. 96 (P 43a), 102 (P 44b), 103 (P 45b).

The peculiarities of the text as they can be evaluated on the basis of the Paris fragment do not provide clues which would allow us to relate it clearly to any of the schools known in the Muslim tradition, although the text is very close to the 'Uthmanic *rasm*. The manuscript may reveal a stage of the handwritten transmission which had not yet reached the level of canonicity which is embodied in the scholarly tradition about the Qur'anic text as we know it today.

Ornaments are found in various places in the manuscript. As the folios corresponding to the beginning and the end of the text have apparently disappeared, there is no evidence of any full page frontispiece or finispiece similar to the illuminations of the Sanaa Qur'an Inv. 20-33.1 (von Bothmer 1987, 4-12). Within the text area, we first

find verse divisions which can barely be considered as ornaments, although the ink strokes have sometimes been enhanced by colour lines. The groups of ten verses are indicated by a device which the copyist knew was to be added in specific places where he left more space than for the divisions between the verses. Two types are found, one square with a circle inscribed within it, the other one rectangular with a green X shape dividing the rectangle into four triangles, each of them filled with a circle between half palmettes. The groups of five verses are singled out by a quatrefoil (fig. 16, l. 11).

The surahs are separated by purely ornamental stripes. As they do not contain any information, it is not possible to decide whether they were meant as an opening headband for the next surah or as a final device for the preceding one. The present paper relies on the study of 26 such illuminations, either those which have been published so far, or those analysed directly. As the material is scattered between three collections, I have listed them below in their normal sequence, with the indication of the place of conservation and the folio number and side when available. For easy reference, I have assigned a tag (column "Short reference" below) to each of them, using the number of the surah which begins below the ornamentation, then a letter indicating either the place of conservation and the folio (G for Gotha MS Orient A 462, P for Paris Arabe 324 c) or Moritz' album and the plate number (M, referring to Cairo, Dār al-Kutub 18953). Thus "s. 46 (G 11a)" refers to the illumination found on Gotha, Universitäts- und Forschungsbibliothek, MS Orient A 462, f. 11 a, between s. 45 and s. 46.

| Surah | Manuscript | Folio | Shortreference | Figure |
|-------|----------------------|-----------------------|----------------|--------|
| 32 | Cairo, DaK 18953 | na (=Moritz, pl. 3) | s. 32 (M 3) | 1 |
| 35 | Paris, BnF 324 c | 23a | s. 35 (P 23a) | 2 |
| 38 | Cairo, DaK 18953 | na (=Moritz, pl. 1-2) | s. 38 (M 1-2) | 3 |
| 44 | Gorha, UFB or. A 462 | 3b | s. 44 (G 3b) | 4 |
| 45 | Gorha, UFB or. A 462 | 6b | s. 45 (G 6b) | 5 |
| 46 | Gorha, UFB or. A 462 | 11a | s. 46 (G 11a) | 6 |
| 47 | Cairo, DaK 18953 | na (=Moritz, pl. 4-5) | s. 47 (M 4-5) | 7 |
| 49 | Cairo, DaK 18953 | na (=Moritz, pl. 6) | s. 49 (M 6) | 8 |
| 57 | Cairo, DaK 18953 | na (=Moritz, pl. 7) | s. 57 (M 7) | 9 |

| | | | | |
|-----|---------------------|------------------------|----------------|----|
| 60 | Cairo, DaK 18953 | na (=Moritz, pl. 8) | s. 60 (M 8) | 10 |
| 64 | Cairo, DaK 18953 | na (=Moritz, pl. 9) | s. 64 (M 9) | 11 |
| 66 | Cairo, DaK 18953 | na (=Moritz, pl. 10) | s. 66 (M 10) | 12 |
| 67 | Cairo, DaK 18953 | na (=Moritz, pl. 11) | s. 67 (M 11) | 13 |
| 69 | Paris, BnFar. 324 c | 30a | s. 69 (P 30a) | 14 |
| 70 | Paris, BnFar. 324 c | 32a | s. 70 (P 32a) | 15 |
| 71 | Paris, BnFar. 324 c | 34b | s. 71 (P 34b) | 16 |
| 72 | Paris, BnFar. 324 c | 36b | s. 72 (P 36b) | 17 |
| 75 | Paris, BnFar. 324 c | 38a | s. 75 (P 38a) | 18 |
| 76 | Paris, BnFar. 324 c | 39a | s. 76 (P 39a) | 19 |
| 81 | Paris, BnFar. 324 c | 42b | s. 81 (P 42b) | 20 |
| 87 | Cairo, DaK 18953 | 551b (=Moritz, pl. 12) | s. 87 (M 12) | 21 |
| 96 | Paris, BnFar. 324 c | 43a | s. 96 (P 43a) | 22 |
| 101 | Paris, BnFar. 324 c | 44a | s. 101 (P 44a) | 23 |
| 102 | Paris, BnFar. 324 c | 44b | s. 102 (P 44b) | 24 |
| 103 | Paris, BnFar. 324 c | 45a | s. 103 (P 45a) | 25 |
| 106 | Paris, BnFar. 324 c | 46a | s. 106 (P 46a) | 26 |
| 107 | Paris, BnFar. 324 c | 46b | s. 107 (P 46b) | 27 |

Typically, a page with the beginning of a surah will have only 11 lines of text since the copyist left a full blank line between the surahs (fig. 16), even if there was only a single word on the last line of the preceding surah, as for Paris, BnF Arabe 324, f. 36b (fig. 17), between s. 71 and 72 or f. 43a (fig. 22), between s. 95 and 96 for instance. Exceptions to this presentation exist: there are 10 lines of text on the page where the change from s. 45 and 46 takes place (Gotha, UFB orient 462, f. 11a; fig. 6), but 12 lines on f. 42b of the Parisian fragment, with the last word of s. 80 written on l. 10 and the *basmala* of s. 81 on the next one (Paris, BnF, Arabe 324, f. 42b; fig. 20).

The artist(s) in charge of the ornaments had to adjust to the shape of the space available. In most of the cases, he/they found an oblong rectangular shape extending from the inner margin to the outer one (s. 32 [M 3]? [fig. 1], s. 46 [G 11a] [fig. 6], s. 60 [M 8]? [fig. 10], s. 66 [M 10]? [fig. 12], s. 71 [P 34b] [fig. 16], s. 75 [P 38a] [fig. 18], s. 87 [M 12]? [fig. 21], s. 103 [P 45a]? [fig. 25], s. 107 [P 46b] [fig. 27]). The headband of s. 49 (M 6) may belong here, although the ornament relies on the architectural

repertoire we shall deal with below (fig. 8). For s. 81 (P 42b), the rectangle is shorter since the last word of s. 80 occupied the right hand part of l. 10 and left only three quarters of a line for the illumination as the copyist had written the *basma* of s. 81 on l. 11 (fig. 20). However, more space was available in various instances when, in addition to the customary full line, part of the last line of the preceding surah was empty. According to the circumstances, this space may have been left blank (s. 69 [P 30a] [fig. 14]), whereas in other cases the illuminator decided to avail himself of it, either to fill it with a row of arcades on top of the ornamental stripe (s. 38 [M 1-2] [fig. 3], s. 44 [G 3b] [fig. 4], s. 47 [M 4-5] [fig. 7], s. 57 [M 7] [fig. 9], s. 67 [M 11] [fig. 13], s. 70 [P 32a] [fig. 15], s. 76 [P 39a] [fig. 19], s. 101 [P 44a] [fig. 23]), or to occupy the height of the two lines on the left with a large band and a smaller element on the right (s. 45 [G 6b] [fig. 5], s. 72 [P 36b] [fig. 17], s. 96 [P 43a] [fig. 22], s. 102 [P 44b] [fig. 24], s. 106 [P 46a] [fig. 26]). The latter may look as a reduced version of the usual stripe or as a simple band connecting the main ornament with the margin.

Beforehand the outline of the illuminations was drawn with ink, then filled with colours, the palette being restricted to yellow, green and red. No information about the preceding surah or the following one is found within these ornaments – the titles were added considerably later – nor was any space left out for such texts.

The ornamental repertory is repetitive and based primarily on geometric patterns. As in the Tashkent and Mashhad Husayn copies, a module is frequently repeated over the whole length of the illumination. They are commonly square or nearly square shapes, with a circle divided into sections which are filled with contrasting colours and separated from each other by lines left blank. Circles and circle related patterns are quite common, arranged as a row (s. 32 [M 3] [fig. 1], s. 44 [G 3b] [fig. 4], s. 60 [M 8] [fig. 10], s. 67 [M 11] [fig. 13], s. 69 [P 30a] [fig. 14], s. 70 [P 32a] [fig. 15], s. 75 [P 38a] [fig. 18], s. 87 [M 12] [fig. 21]), or as two or more rows, with interlace (s. 66 [M 10] [fig. 12], s. 96 [P 43a] [fig. 22], s. 106 [P 46a] [fig. 26]). The repetition of a square decorated with various shapes belongs here (s. 57 [M 7] [fig. 9], s. 71 [P 34b] [fig. 16], s. 101 [P 44a] [fig. 23]).

Interlace is commonly used, either in combination with the circles, as we have seen, or as a pattern allowing for the covering of the surface of the ornamental stripes (s. 38 [M 1-2] [fig. 3], s. 45 [G 6b] [fig. 5], s. 64 [M 9] [fig. 11], s. 72 [P 36b] [fig. 17], s. 81 [P 42b] [fig. 20], s. 102 [P 44b] [fig. 24], s. 107 [P 46b] [fig. 27]). Less sophisticated versions of the interlace are also present, as for example with s. 47 (M 4-5) (fig. 7), s. 76 (P 39a) (fig. 19) or s. 103 (P 45a) (fig. 25).

The headband preceding s. 49 (M 6) stands alone in our current documentation (fig. 8). It is so far the only instance of architectural repertory found within the rectangular frame of the ornament instead of being set above the left hand part. Two rows of arcades are depicted one above the other; both are set between two bands with a repeat geometric module. In the same way, s. 46 (G 11a) may have been intended as a representation of two arches – the vignette in the inner margin – supported by columns rendered by the three thin decorative stripes which constitute the main part of the illumination (fig. 6).

The surah bands are usually provided at both extremities with a marginal ornament, the vignette. In most instances, its size is not the same on both sides, one of them being larger than the other one. This is not the case for s. 71 (P 34b): both vignettes have approximately the same size (fig. 16). Interestingly enough, the larger of two vignettes affixed to the same ornamental stripe found on the verso side of a folio is often located in the inner margin, a place where it was barely visible. This might be due to the fact that the illuminator(s) worked on folios still loose and failed to identify the verso of the folios – each of them being a full parchment leaf.

The repertory of the vignettes is mainly vegetal, but architectural components are sometimes integrated into the composition. The illuminator assembles arbitrarily the shapes and does not look for a naturalistic rendition. It is actually infrequent to find a shape which can be recognised, as in the ornament of s. 69 (P 30a) where grapes appear in the outer margin vignette (fig. 14). A spearhead-like device, often associated with a cupule, occurs frequently in these marginal ornaments, as well as on the twigs, which in some places grow from the larger part of the stripe, over the narrower band, which occupies the right hand part of the space between the surahs, and reaches the margin (see s. 72 [P 36b])

[fig. 17]). Among the most significant components, note should be taken of a blackberry like shape (see s. 81 [P 42b] [fig. 20]) probably related to the grape mentioned above whereas a pomegranate could be meant by a small circular shape crowned by a tuft of pointed tips (s. 47 [M 4-5] [fig. 7], s. 76 [P 39a] [fig. 19] or s. 96 [P 43a] [fig. 22], for instance).

The illuminator tends to assemble the various shapes, usually in a symmetric way (see s. 69 [P 30a] [fig. 14]). This explains why in many cases there are three elements side by side. When an architectural component – columns or arches – is inserted (as for s. 32 [M 3] [fig. 1], s. 45 [G 6b, outer margin] [fig. 5], s. 46 [G 11a, outer margin] [fig. 6], s. 66 [M 10] [fig. 12], s. 72 [P 36b, inner margin] [fig. 17], s. 76 [P 39a, both margins] [fig. 19], s. 81 [P 42b, inner margin] [fig. 20], s. 96 [P 43a, outer margin] [fig. 22]), it tends to provide the vignette with a specific structure. A domed or vaulted component serves as a general outline and the vegetal elements take place within the space thus defined as well as around it (s. 72 [P 36b, inner margin] [fig. 17], s. 76 [P 39a, inner and outer margins] [fig. 19], s. 96 [P 43a, outer margin] [fig. 22]). S. 46 (G 11a, outer margin) is an exception to the general orientation of this group of vignettes (fig. 6): the two arches are meant to be seen as supported by the bands which constitute the headband, not as a kind of roof for the vegetation which is however present above the arches – as a series of pomegranates (?).

The illuminations bear some resemblance to those found on Umayyad copies of the Qur'an. On a general level, the way in which they adapt to the space available between the surahs is already attested in the large Umayyad *muṣḥaf* of Sanaa (DaM Inv. 20-33.1; von Bothmer 1987, fig. 19, 20 and 24 for instance). The repetition of a square module in order to fill in the stripe is also present in Umayyad Qur'anic manuscripts, for instance in Dublin, Chester Beatty Library, MS 1404, before s. 35 or 67 (Moritz 1905, fig. 21 and 22). The same can be said of the presence of two vignettes with each ornamental stripe as well as of the lack of any title (von Bothmer 1987, 13).

The arcades remind us directly of the famous opening pages of the Sanaa manuscript. Of course, the space available between the surahs does not allow for the depiction of a whole building, but we know from

other Umayyad examples, notably the fragment Saint Petersburg, National Library of Russia, Marcel 13 (f. 1a [s. 18], 19b [s. 23] and 37a [s. 38]; Déroche 2004, fig. 3, 4 and 5d), that architectural components were found in such places. Single rows of arcades appear frequently in the manuscript, but we only know one place with two superposed rows (s. 49 [M 6] (fig. 8)) which come closer to DaM Inv. 20-33.1 illuminations (von Bothmer 1987, pl. I-II). On the other hand, mosque lamps which feature conspicuously in both frontispieces as well as in Marcel 13 surah headings (Déroche 2004, fig. 5d) are seen hanging between columns in only one of the illuminations published by Moritz (s. 38 [M 1-2] (fig. 3)).

The integration of architectural elements in the illumination is not restricted to the ornamental stripes themselves. The vignettes also include them, in contradistinction to the Umayyad illuminations known to this day. The “domed vignettes” with vegetation growing above remind us of the Sanaa full page openings with trees located “above” the buildings (von Bothmer 1987, 11, pl. I-II and fig. 1-2). In addition to this, the vignette of s. 32 (M 3) evokes directly an illumination found in the fragment Saint Petersburg, National Library of Russia, Marcel 13 between s. 22 and 23 (f. 19b; Déroche 2004, 246, fig. 4): a column supports a spear-headed shape, covered with scales, which encroaches on the margin; in the Cairo copy, a similar composition is reduced to the size of a vignette (fig. 1). Likewise, the two stems which grow from the basis of the columns, like in s. 32 (M 3) (fig. 1) or s. 96 (P 43a) (fig. 22), find their origin in Umayyad illuminations, that found before the beginning of s. 19 in the fragment Istanbul, TIEM ŞE 321 for instance. A detail found in s. 38 (M 1-2) (fig. 3) and s. 47 (M 4-5) (fig. 7) can even be related to a Sassanian component taken over in the Umayyad repertory of the Dome of the Rock: the double wings which in two instances replace the crenellated element crowning the arcade remind us of similar shapes found on the mosaics (Grabar 1996, 79, fig. 29; Grabar and Nuseibeh 1996, 119-21) and are also consonant with illuminations found in Umayyad Qur’anic manuscripts, before s. 32 and s. 38 in the fragment TIEM, ŞE 321 for instance (Déroche 2002, 633, fig. 12). Actually, the illumination preceding s. 47 (M 4-5) relies heavily on the double wings element which is also found in the vignette (fig. 7).

The ornamentation found in the manuscript, concurs with the evidence gained from the analysis of the text in suggesting an early date for this copy. The lack of any surah titles in the decorative stripes found between the surahs and the two vignettes affixed to these illuminations support a date prior to the 3rd/9th century. In addition to these features, the comparison with Umayyad illuminations substantiate the reliance of the illuminators on a shared repertoire. On the other hand, the quality of the decoration draws the attention: the stripes are crudely executed, with only three colours and without any gilding, in stark contrast both to the lavishness of the size of the book and to the high level of craftsmanship evidenced in some Umayyad *muṣḥaf*. The same could be said of the other two 12 lines copies – although in this case the illuminations do not rely on elements found in Umayyad Qur’anic manuscripts.

The Mashhad Husayn copy was clearly a single volume. An assessment of the Cairo and Tashkent manuscripts is more complicated as both are in a fragmentary state. However, on the basis of the text extant from the original Cairo copy, divisions into two, seven and thirty volumes can be excluded, as the places where the end/beginning of such volumes should occur, coincide with a page of text (respectively 18: 75, the middle of the text, is present on Cairo f. 258, the beginning of the 6th seventh [34: 20] is on Arabe 324, f. 19a and the beginning of *juz*’ 26 [46: 1] found on Gotha f. 11a).

There is an obvious relationship between the Tashkent, Cairo and Mashhad Husayn manuscripts: the slightly oblong format, the size of the folios, the way in which the parchment sheets were kept flat in the process of binding them together, the volume, the lack of short vowels notation, the illumination which avoids using gold, are features shared by the three copies. Their script varies: the Tashkent manuscript is close to the Mashhad Husayn one, while the Cairo codex stands apart. However, the total number of folios of the latter is less important than in the other two copies. They contrast with the large vertical Qur’anic codices from Umayyad times, with 20 lines to the page and a fair amount of vocalisation.

Some sources about this period may provide additional clues. A legal authority active in the second half of the 8th century, Mālik b. Anas (died 179/796) expressed, about the *muṣḥaf*-s, opinions by which the 12 lines

group of Qur'anic manuscripts apparently abide. He conveyed his disapproval of the vowel signs on the reference *muṣḥaf* he called *ummahāt al-maṣāḥif*, for instance (Jahdani 2006, 274), and condemned the multi-volume copies of the Qur'an (Jahdani 2006, 276). He also disapproved illumination, according to a later commentator, either because it might distract the reader, or because the use of gold is frowned upon by the Malikite school (Jahdani 2006, 275). It is actually surprising that copies which required an enormous investment for the purchase of more than 1000 sheets of parchment are so poorly illuminated, without any gilding. This avoidance could only be the result of a deliberate decision. The same can probably be said of the illuminators of the four manuscripts who were by no means as proficient as those of the Sanaa and Saint Petersburg fragments.

These huge and extremely expensive copies can only be conceived as imperial presentation copies produced at a moment when rigorist views – like those expressed by Mālik – had the upper hand in the second half of the 2nd/8th century and the authorities needed to impress the Muslim community by an outstanding gift. Such a move could correspond to an account by Mālik b. Anas, transmitted by Samhūdī. According to this source, the Abbasid caliph al-Mahdī ordered expensive copies of the Qur'an which he sent to the major cities of the Empire, imitating a similar measure taken a few decades before by al-Ḥajjāj b. Yūsuf (al-Samhūdī 1984, 668) – who was himself emulating caliph 'Uthmān. In the mosque of Madīna, the Abbasid codex superseded the Umayyad one which was put within its chest next to the minbar. This move seems consistent with al-Mahdī's politics regarding the Umayyads. It is well known that he tampered with the inscription of the Dome of the Rock where his name replaced that of 'Abd al-Malik. The same desire to eliminate the traces of the Umayyads in the religious sphere may also account for various decisions which are reported to have been taken by him. According to Ṭabarī, he had the veils or *kiswas* covering the Ka'ba in Mecca which had been offered by the Umayyads and accumulated over the years substituted by his own (Ṭabarī 1879: 483; Kennedy 1990: 194). By the same token, he wanted to eliminate the wooden basis which Mu'awiyah had added to the *minbar* of the Prophet in the Madīna mosque, but had to give up his plans on Malik's advice as

this might have damaged the original structure (Ṭabarī 1879: 483; Kennedy 1990: 195). On the basis of these various elements, I would suggest a dating to the second half of the 2nd/8th century, perhaps more precisely to the reign of al-Mahdī (775-785) 10th/11th. The 12 lines Qur'anic manuscripts answered the propaganda needs of the newly established Abbasid power in general, and those of al-Mahdī in particular. The visually recognisable codex was different and bigger than its Umayyad forerunners. I would suggest that the Cairo manuscript is slightly earlier than the Tashkent and Mashhad Husayn copies: it relies more clearly than the other two on an Umayyad repertoire and the more impressive size of the Tashkent and Mashhad Husayn manuscripts, using extensively the *mashq* technique, may reflect a better control of the techniques required in the race for gigantism.

Which was the place of production of these manuscripts? The imperial patronage suggested here may imply that the copies were transcribed in the vicinity of the centre of the Empire. In 1891, Shebunin suggested that the Tashkent copy was Basran on the basis of textual peculiarities related to the 'Uthmanic copy kept in Basra (Shebunin 1891, 124). This argument fails to convince and further research should explore this question.

Awe is certainly the word which best describes the impression left by these monumental copies. They are based on the very simple but effective idea of magnifying the Word of God. From the sheet to the volume, all the components were brought to a limit, actually that of the hides used in the preparation of parchment. In the historical context of the beginning of Abbasid rule, these copies were the last word – in this field – in the struggle with the overthrown Umayyad dynasty. They could also answer the need to give its full importance to the Qur'anic text vis-à-vis the other religions of the Book. The technique was certainly the weak point of these manuscripts: their size and weight needed a stronger structure and the fact that such mammoth parchment volumes were no longer produced in the 3rd/9th century, points certainly to disappointing results when they were handled.

See Appendix for the following Figures

1. Cairo, DaK 18953, s. 32, f. n.a. (B. Moritz, *Arabic palæography*, pl. 3).
2. Paris, BnF 324 c, s. 35, f. 23a (detail).
3. Cairo, DaK 18953, s. 38, f. n.a. (B. Moritz, *Arabic palæography*, pl. 1-2).
4. Gotha, UFB orient A 462, s. 44, f. 3b (detail).
5. Gotha, UFB 462, orient A s. 45, f. 6b (detail).
6. Gotha, UFB 462, orient A s. 46, f. 11a (detail).
7. Cairo, DaK 18953, s. 47, f. n.a. (B. Moritz, *Arabic palæography*, pl. 4-5).
8. Cairo, DaK 18953, s. 49, f. n.a. (B. Moritz, *Arabic palæography*, pl. 6).
9. Cairo, DaK 18953, s. 57, f. n.a. (B. Moritz, *Arabic palæography*, pl. 7).
10. Cairo, DaK 18953, s. 60, f. n.a. (B. Moritz, *Arabic palæography*, pl. 8).
11. Cairo, DaK 18953, s. 64, f. n.a. (B. Moritz, *Arabic palæography*, pl. 9).
12. Cairo, DaK 18953, s. 66, f. n.a. (B. Moritz, *Arabic palæography*, pl. 10).
13. Cairo, DaK 18953, s. 67, f. n.a. (B. Moritz, *Arabic palæography*, pl. 11).
14. Paris, BnF Arabe 324 c, s. 69, f. 30a (detail).
15. Paris, BnF Arabe 324 c, s. 70, f. 32a (detail).
16. Paris, BnF Arabe 324 c, s. 71, f. 34b.
17. Paris, BnF Arabe 324 c, s. 72, f. 36b (detail).
18. Paris, BnF Arabe 324 c, s. 75, f. 38a (detail).
19. Paris, BnF Arabe 324 c, s. 76, f. 39a (detail).
20. Paris, BnF Arabe 324 c, s. 81, f. 42b (detail).
21. Cairo, DaK 18953, s. 87, f. 551b (B. Moritz, *Arabic palæography*, pl. 12).
22. Paris, BnF Arabe 324 c, s. 96, f. 43a (detail).
23. Paris, BnF Arabe 324 c, s. 101, f. 44a (detail).
24. Paris, BnF Arabe 324 c, s. 102, f. 44b (detail).
25. Paris, BnF Arabe 324 c, s. 103, f. 45a (detail).
26. Paris, BnF Arabe 324 c, s. 106, f. 46a (detail).
27. Paris, BnF Arabe 324 c, s. 107, f. 46b (detail).

Abbreviations

| | |
|-----|--|
| BnF | Bibliothèque nationale de France (Paris) |
| DaK | Dār al-Kutub (Cairo) |
| DaM | Dār al-Maḥṣūṭāt (Sanaa) |
| UFB | Universitäts- und Forschungsbibliothek (Gotha) |

NOTES

¹ Doha, Museum of Islamic art, MS 213; Doha, Museum of Modern Art, n° 224.

² I shall refer to each of them according to the place where the bulk of the manuscript is kept, although in two cases some of their folios are scattered among various collections around the world.

³ For a study of the manuscript, with special attention paid to the Doha folios see Déroche 2013.

⁴ A. Gacek suggests that "this term may have also been used in the sense of a script or a style" and had thus various meanings (Gacek 2006, 237).

⁵ The case of MS Arabe 324 is unique within the Parisian collection of old Qur'anic codices: instead of grouping the folios according to their script, the librarian arranged them according to the order of the Qur'anic text.

⁶ Surprisingly, E. Whelan (Whelan 1990, 120 and n. 25) was unaware of this important contribution.

⁷ He distinguishes between the 34 parchment folios with a script imitating the original and another copy of which 61 folios have been used to complement the main manuscript.

⁸ Note that gold is found only on f. 8 v°, from Arabe 324 a, a later fragment.

⁹ See p. 152 H for the reference system used for the ornamental stripes between the surahs.

¹⁰ A C14 dating of the parchment of a Folio in Paris seems to corroborate this.

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FIGURES

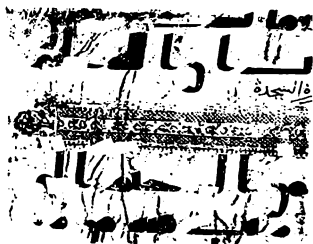


Figure 1

Cairo, DaK 18953, s. 32, f. n.a. (B. Moritz, *Arabic palæography*, pl. 3).



Figure 2 Paris, BNF 324 c, s. 35, f. 23a (detail).

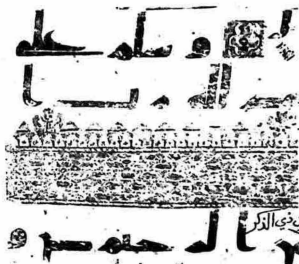


Figure 3 Cairo, DaK 18953, s. 38, f. n.a. (B. Moritz, *Arabic palæography*, pl. 1-2).



Figure 4

Gotha, UFB orient A 462,
s. 44, f. 3b (detail).



Figure 5 Gotha, UFB 462, orient As. 45, f. 6b (detail).



Figure 6 Gotha, UFB 462, orient As. 46, f. 11a (detail).



Figure 7 Cairo, DaK 18953, s. 47, f. n.a. (B. Moritz, *Arabic palæography*, pl. 4-5).



Figure 8

Cairo, DaK 18953, s. 49, f. n.a. (B. Moritz, *Arabic palaeography*, pl. 6).



Figure 9

Cairo, DaK 18953, s. 57, f. n.a. (B. Moritz, *Arabic palaeography*, pl. 7).



Figure 10

Cairo, DaK 18953, s. 60, f. n.a. (B. Moritz, *Arabic palaeography*, pl. 8).



Figure 11

Cairo, DaK 18953, s. 64, f. n.a. (B. Moritz, *Arabic palaeography*, pl. 9).

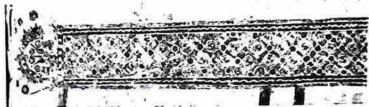


Figure 12 Cairo, DaK 18953, s. 66, f. n.a. (B. Moritz, *Arabic palæography*, pl. 10).



Figure 13
Cairo, DaK 18953, s. 67, f. n.a. (B. Moritz, *Arabic palæography*, pl. 11).



Figure 14
Paris, BnF Arabe 324 c, s. 69, f. 30a (detail).



Figure 15
Paris, BnF Arabe 324 c, s. 70, f. 32a (detail).

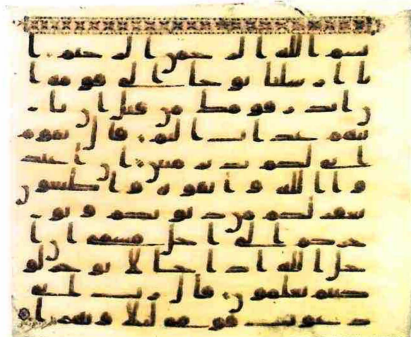


Figure 16 Paris, BnF Arabe 324 c, s. 71, f. 34b.



Figure 17 Paris, BnF Arabe 324 c, s. 72, f. 36b (detail).



Figure 18 Paris, BnF Arabe 324 c, s. 75, f. 38a (detail).



Figure 19 Paris, BnF Arabe 324 c, s. 76, f. 39a (detail).



Figure 20 Paris, BnF Arabe 324 c, s. 81, f. 42b (detail).



Figure 21

Cairo, DaK 18953, s. 87, f. 551b (B. Moritz, *Arabic palaeography*, pl. 12).



Figure 22 Paris, BnF Arabe 324 c, s. 96, f. 43a (detail).



Figure 23 Paris, BnF Arabe 324 c, s. 101, f. 44a (detail).



Figure 24 Paris, BnF Arabe 324 c, s. 102, f. 44b (detail).



Figure 25 Paris, BnF Arabe 324 c, s. 103, f. 45a (detail).



Figure 26 Paris, BnF Arabe 324 c, s. 106, f. 46a (detail).



Figure 27

Paris, BnF Arabe 324 c, s. 107, f. 46b (detail).

How Long Did It Take to Copy An Islamic Manuscript? Some New Data from Multi-Colophon Manuscripts

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INTRODUCTION

THE QUESTION IS what evidence is available regarding how long it would take to copy an Islamic manuscript? How fast could a professional scribe work while maintaining an acceptable level of accuracy, and what are the factors that determine their speed at work? This article is to try to examine a handful of examples, drawn chiefly from the British Library's collections manuscripts in which the copyist has left explicit evidence in the form of actual dates of copying one or more texts. Evidence is also to be traced from imprecise statements as to how long their work took them.

A considerable number of accounts about the calligrapher (*khattāt*) has been written, most of which would be in Turkish. The accounts discuss methods and regimen of working. Here, however, our main concern is with the work of the copyist, whose job is, generally speaking, to transcribe texts (*istinsākh*) accurately and in a readable form rather than to present a patron with a masterpiece of calligraphy.

The question about how fast a copyist might have worked has been

given some consideration in the pioneering textbook on Islamic codicology compiled by Professor François Déroche, that includes contributions from a group of colleagues. This work, originally published in French,¹ has since appeared also in English² and Arabic³ languages. Much of the material included in that section of the book, however, is derived from a single, rather unrepresentative, source, originating in 13th/19th century Uzbekistan. Déroche, however, has published an important article devoted to that specific subject: *'The copyists' working pace: some remarks towards a reflexion on the economy of the book in the Islamic world.'*⁴ In addition, his study enriches the body of evidence and raises interesting points regarding possible approaches to further research on the subject. The present article is inspired both by an awareness of certain gaps in the codicology manual and also by some important points raised in *'The copyists' working pace'*. Because the latter appeared in a specialist conference volume published in Germany, it may not have gained as wide a readership as it deserves, and also for the convenience of readers, such points will be summarised here before we proceed further.

Déroche argues that written evidence concerning the conditions under which the Muslim copyist worked is scarce, particularly regarding the work organisation, wages, and work pace. Déroche, however, offers some valuable insights into working practices. The fact that evidence provided is based on a wide variety of sources further strengthens the conviction of the researcher that this field of research is one where co-operation between scholars working on (and probably, also living in) different geographical and linguistic regions would probably produce much more material to add to our extremely exiguous stock of knowledge. This research topic would seem to be of a rarefied type, but it is not a trivial one. There is no valid reason to consider the history of 'publication' prior to the advent of printing less interesting or significant than after it. The amount of published research that exists on the history of printing and publishing, especially in the western world shows the amount of interest and importance it receives.

The approach adopted by Déroche has one limitation, that is the Holy Qur'an copying is not a typical exercise suitable for the purposes of analysis, especially in regard to the work pace, it ought to be consid-

ered in a category of its own. It is noticeable (relevant to that category, since not all *Muṣḥafs* can be described as calligraphic work), that no clear distinction is drawn between the work of the calligrapher (*khattāt*, *khwushnīvīs*, *hattat*) and that of the copyist (*kātib*, *mustansikh*, *kātib/kātip*) – in a sense that the two jobs overlap. Consequently the production of a manuscript in which quality of handwriting is for any reason of paramount importance belongs, again, to a different category. One useful category that Déroche has highlighted is that of manuscripts produced for the copyist's own use. Here one may assume that a faster than normal work-rate may be feasible, for people who customarily read their own writing (in such case it may be called scrawl) with greater ease than others.

One example of this is a miscellany of Persian and Arabic texts preserved at the British Library (Or. 13214). Texts comprise rare works found in Baghdad, Aleppo, and possibly elsewhere by a man named *Nizām*, who seems, each time, to have transcribed the texts which most interested him, over a matter of a few days. The handwriting suggests that (a) circumstances compelled him to work very fast, and (b) the copying was done for his own use rather than that of others. In attempting to edit one of the texts in this volume, the present writer had difficulty in reading a number of words because of the almost total lack of dots on the letters, but was thankfully aided by the arrival of the late Professor Muḥammad Ja'far Maḥjūb, who came in a visit to London, and was one of Iran's great literary scholars. When I enquired how he had come to acquire such proficiency in deciphering *bī-nuqṭa* writing, he informed me that one of his first jobs as a young man had been that of a clerk in a law-court, where one simply had to learn to read any document, however poorly or incomprehensibly written.

As for Professor Déroche's study, that discussed how working conditions may have influenced the work pace, first, he explains that copying a text from an existing manuscript does not necessarily entail reproducing its actual layout in the new copy, that would be the exception. He reminds us that scribes often worked either partly or wholly from dictation, and in some cases (mainly with the Qur'an) from memory. Also, there are uncommon instances, of copies known to have been produced by a team of scribes (or else – an eventuality not touched on in the

article—by more than one scribe, who works successively). One calligrapher farmed out work to his students and then signed (for which he was paid) it all as his own.

Déroche, next, imposes quite an intriguing question: is it possible that certain scribes would be specialised in particular subjects, or even in copying particular texts (aside from the Qur'an, a frequent specialisation)? Déroche cites an individual who is known, from manuscripts at the Bibliothèque nationale de France, to have copied one work on history twice. To this may be added the fact that the British Library holds three copies of Sharaf al-Dīn 'Alī Yazdī's *Ẓafarnāma*, a history of Tīmūr, copied by the Shīrāzī *nasta'liq* calligrapher Murshid al-'Aṭṭār:



Add. 7635, dated Rajab 929/May-June 1523;
I.O. Islamic 137, dated 5
Ramaḍān 939/31 March
1533; and the first part
of Or. 1359, dated
Rabī'al-Awwal
959/March 1552.⁵

It is particularly instructive to compare them together as they represent work from the start, middle and end of Murshid's career. The hypothesis in question could be more easily tested if there were an international group of researchers who were able and willing to collaborate in such investigations and gather relevant data.

Regarding the places where manuscripts were produced, apart from the exceptional cases of royal "workshops" and the oft-cited family "cottage industry" of Shīrāz, it is known from colophons and other sources that many scribes worked either at home or in a library and/or educational institution, a mosque, or a small workshop; various other, more unusual, copying-places are also documented.

Focusing on his central subject, copyists' work-rate, Déroche first considers what one source, al-Zabīdī's rather misleadingly named *Ḥikmat al-ishrāq*, has to say about professional calligraphers and the

number of times they are said to have copied Islam's Holy Book – in one case, three hundred and sixty. The presence of such statistics solely does evince a concern with quantity as well as quality of production. Other sources cited by Déroche include the famous Īlhānīd era vizier Rashīd al-Dīn Faḍl Allāh's Waqf deed for the Rab'ī Rashīdī quarter of Tabriz,⁶ the *Voyage* of the French traveller Jean Chardin (1643-1713),⁷ and a number of anecdotes about prodigiously productive scribes, the last-mentioned being garnered chiefly from an article by two Uzbek scholars, Shadman Vahidov and Aftandil Erkinov.⁸ Probably more reliable, generally speaking, are the copyists' own statements as recorded in the colophons of manuscripts. One important example – though still more in the domain of calligraphy than of simple transcription – is to be found in calligraphers' statements as to how many times they had copied the Qur'an, including the copy on which they are "signing off" in the colophon at hand.

The argument develops to a more precisely indicative form of evidence, derived from cases where the copyist either (a) provides the date of commencement as well as that of conclusion; or (b) gives separate completion dates for separate sections of a single work, allowing work-rates to be extrapolated – as with a *Juz'*, or thirtieth part, of the Qur'an; or (c) actually states how long a particular task took him. Déroche sheds light on a territory that has barely been investigated at all, with sometimes intriguing results. Examples of the third category found by Déroche at the Bibliothèque nationale de France are (a) a copy of Jalāl al-Dīn Rūmī's *Mathnawī* in Paris (MS. persan 266), the copyist of which appears to have completed the whole work, some 273 folios, in just fifteen days – with an average work-rate of 450 *bayts* (couplets) per day; (b) an Arabic text (arabe 3280) with six dated colophons for separate parts; and (c) *Juz'* 23-29 of a copy of the Qur'an (arabe 534-536, 538-540). (Incidentally, it is reported that the Ottoman calligrapher Ramaḍān ibn Ismā'īl (d. 1091/1680) copied one *Ḥizb* (one-sixtieth of the entire text), amounting to ten pages, every day.⁹ A substantial amount of information on master penmen and their work exists in Turkish sources, part of which researchers have already brought to light.)

In conclusion, Déroche points out that as individual sections of the Qur'an are equal, they do provide a fair basis for comparison between scribal work-rates. More generally, however, he accurately observes:

It is of course impossible to reduce the copying of manuscripts to figures. Many factors should obviously be taken into account when trying to evaluate this process; some of them are closely connected with the individual's history and will therefore remain definitively outside of our reach. Others are known, but difficult to assess... The actual conditions under which the manuscripts were transcribed need to be better investigated in order to get a better understanding, first of the transmission of the texts, then more broadly of the economy of the book in the Islamic world.

Hence the importance of garnering as many details as possible – one of many fields in which the late Iraj Afshar excelled.

FIELD OF RESEARCH AND TYPES OF EVIDENCE

In response to Déroche's insight regarding the value of multiple colophons, the present writer set out to search for further examples, including those examined below. The remainder of this article will focus upon manuscripts of the *Mathnawī*, the renowned poem in Persian on Islamic spirituality and ethics by the 7th/13th century saint, sage and poet Jalāl al-Dīn Rūmī. (Another possible subject area would be literary *Kulliyyāt*, or collected works). There are three main reasons for selecting Rūmī's masterpiece: first, the work is divided into six Books (in Persian, *Daftar*); second, there are many extant copies; third, the researcher has some familiarity with the author and his works.

The first step was to look in documented manuscripts of the *Mathnawī* and a sample of other works in Persian for evidence such as the time taken to copy a volume, individual text, or sections of a text. Consequently, the interpretation of dates and work-rates is a matter of approximation. It must be taken into consideration instances when a copyist (or calligrapher) might for one reason or another have to take a break from a task, for a short or long while. Copyists might also have sometimes worked on more than one assignment at a time and/or been prevented from producing their normal daily output by circumstances such as travel or (as we shall see below) warfare.

For present purposes, we will posit six different categories of internal evidence stated below:

In the first category, manuscripts that contain general imprecise statements regarding copying time would belong. These may take various forms. What they have in common is that either no actual length of time is mentioned or else there is not sufficient information to draw any definite inference: e.g. 'copied in haste, in a few days'; or 'copied in the last part of Sha'bān'; or a colophon indicating the year of commencement and the year of completion.

In the second category, a very general idea of the time taken to complete a manuscript can be gained. It can be gained from colophons that either state directly the number of months or years that the copyist would spend on the task, or mention the years in which part or all of the text was commenced and completed.

To the third category belong manuscripts which have colophons, which mention some aspects of the project's chronology, such as approximate copying dates for more than one of the text's constituent sections, without any precise inference being possible as to the timing or other aspects of the process.

Fourthly, there are manuscripts (although they are scarce, unfortunately for present purposes) with more than one colophon, which document the completion dates of consecutive texts that cannot be however, reasonably supposed to indicate continuous daily work.

Déroche has rightly drawn attention to the value of this type of evidence, provided by what he terms 'intermediary colophons'.¹⁰ An example would be a volume in which one text was copied in Šafar of one year, another in Shawwāl of the same year, and another in Rajab of the following year.

The two final categories are of greater value for our purposes. The fifth comprise manuscripts having two or more colophons which document the completion dates of transcribing consecutive texts in a manner that may reasonably be taken (in the light of existing knowledge) as indicating either continuous daily work or, at least, tasks of copying undertaken in chronological sequence. For instance, a copyist might record that Part I was completed in mid-Jumādā l-Ūlā, Part II in early Jumādā l-Thānī, Part III in late Jumādā l-Thānī, and Part IV in mid-Rajab.

Category Six, the last, best, and rarest of all, comprises manuscripts with authentic colophons giving precise and explicit start and finish dates for individual texts or entire volumes, or alternatively state the number of days taken to complete the task of transcription. So far only two such copies of all or part of Rūmī's *Mathnawī* have come to light during my brief research, and they appear to be rare. It seems likely, though, that with prolonged searching, more could be found. To extend the search to manuscripts of literary *Kullīyyāt* (collected works) would greatly increase the chances of success.

Category 1: General Statements

One example of the 'general statement' type is:



Or. 14091, an 11th/17th century manuscript containing treatises by the Persian metaphysician Šā'in al-Dīn 'Alī Turka Iṣfahānī and others: twelve in Persian and three in Arabic.¹¹

According to the scribe, the 209 folios of text were transcribed at Kirmān, in 1035/1625-6 '*dar andak rūzī 'alā sabīl al-ta'jīl*', meaning 'in a few days, in a hasty way' (see illustration in Appendix). Now, the texts in question are complex and demanding, being largely devoted to matters of metaphysics. It seems improbable that even someone conversant with the discourse and vocabulary found in such texts, as this copyist probably was, could have worked at a speed comparable to one transcribing love poems.

Also from the 11th/17th century is an Arabic codex in the British Library:

Or. 9581, comprising four works on Ḥadīth sciences by 'Umar Ibn al-Mulaqqin, a well-known *muḥaddith*, together with commentary by the copyist himself. At the end of *al-Bulgha fī l-Ḥadīth*,¹² the copyist reproduces the author's colophon.

This appears to indicate the number of days taken for one *Risāla*. He composed and wrote out the whole work (*ta'lif wa ta'liq*) in the space of five days – and two-thirds of it, after an interval, in just two days. Ibn al-Mulaqqin does not specify that this was the time taken to compose *al-Bulgha* rather than the four works in the manuscript, but to have composed and written out all four in so short a time seems improbable.

To conclude the discussion of this category of evidence: statements of this type are interesting to note, but are of little use as evidence for actual copying speeds, as distinct from copyists' general perceptions. Overall, they are of much greater value as evidence for the culture of text and book production.

Category 2: Colophons Stating Approximate Overall Timespans

Under this section, such type of manuscripts provide information of a different kind, still highly imprecise, in which the copyist either specifies the years in which he began and completed an assignment or else states directly the number of years that he took. Examples exist in a number of copies of Mawlānā Rūmī's *Mathnawī* preserved in the Majlis-i Shūra-yi Milli (National Consultative Assembly) in Tehran and other libraries in Iran. Unfortunately it has not been possible to examine them in person. Considerations of space permit only a few to be mentioned here.

However, even a brief perusal of the catalogue entries for these manuscripts yields interesting information of various kinds. For instance, the great late classical poet and master calligrapher Mīrzā Shafī' Wiṣāl Shīrāzī (d. 1262/1846) seems to have penned at least one fine copy of the *Mathnawī* (there are other copies of part or all of the poem which are also attributed to him, including an undated manuscript in Farhang Library, Isfahan): Majlis Library MS. 2653, dated 1243/1827-8. Furthermore, Wiṣāl seems also to have set a precedent and, intentionally or otherwise, established something of a family business. Four of his sons also produced copies of the *Mathnawī*: Aḥmad (Majlis Library 5093, in *naskhī*, dated 1266/1850-51); Muḥammad Ismā'īl (Majlis 1180, also in *naskhī*, described in the catalogue¹³ as featuring very fine illumination, copied over three years in high-quality *nasta'liq* script and dated 1267/1851-2); Waqār (Malik Library, Tehran, MS. 5981, in calligraphic *naskhī*, dated 1274/1858-9); and Dāwar (Majlis Library 432, in

fine *naskhī*, dated Rajab 1280/late December 1863-early January 1864).

We must now return to our subject. From the 373 copies of the *Mathnawī* for which catalogue references are cited by Munzawī,¹⁴ the following ten – all in Iranian libraries, and cited in chronological order – will serve as representative examples, in that the colophons indicate that they took between two and three years to complete. There are other manuscripts in which the first and last dates are separated by five years or more, or even a decade; but some of these may have been the work of more than one copyist or may even possibly comprise a set of *Daftars* derived from two or more 'odd volumes' surviving from formerly complete sets.

Sipahsālār Madraṣa Library, Tehran, MS. 225: *Daftar* I, Rajab 776/early December, 1374-early January 1375; *Daftar* II, Ṣafar 777/early July 1375; five out of six *Daftars* in 6-7 months (180-200 days).



Aṣghar Mahdawī collection, Tehran, MS. 497: dated 808-809/1405-7.



Dānīshgāh-i Tīhrān (Tehran University) MS. 7/5238: dated 891-893/1486-8 (includes *Kullīyyāt*, or collected works, of 'Aṭṭār).



Majlis Library, Tehran, MS. 1176: 892-894/1487-9.



Āstān-i Quds Library, Mashhad, MS., Adabiyyāt 904: Shiraz (?), 1001-1003/1592-5.

Majlis Library MS. 1178: now only *Daftars* 1, 2, 4, 6; Balkh, 1047-1050/1637-1641.

Salṭanatī (Royal) Library, Tehran, no number given: dated Ramaḍān 1065/August 1655, 1066/1655-6; 1067/1656-7.

Tehran University, Islāmpūr MS. 99: *Daftar* I, Shawwāl 1113/March 1702; *Daftar* VI, 1114/1703-4.

Majlis Library MS. 5073: 1199-1200/1784-6.

Salṭanatī MS. 503: dated from 1281-1284/1864-8.

Category 3: Colophons Implying Indeterminate Intervals in Copying

Although examples of this phenomenon are very common, two must suffice for present purposes. That is because this kind of evidence and the process of interpretation are perhaps most usefully illustrated by a complex example such as British Library manuscript Or. 4513. It contains the seven *mathnawīs* – lengthy poems in rhyming couplets – of the great Persian poet and Sufi metaphysician ‘Abd al-Rahmān Jāmī (d. 890/1492), which are known by the collective title of *Haft Awrang* (‘Seven Thrones’). One of the two scribes responsible, names himself as Darwīsh ‘Alī ibn Mawlānā Darwīsh Muḥammad; he wrote in *naskhī* script and copied most of the poems; the other, who is unnamed, wrote in *nasta‘liq*. Both have given completion dates for some poems. Despite certain eccentricities, such as one colophon in which Darwīsh ‘Alī must surely have erred by one hundred years in the date given, this codex does provide some evidence as to the time taken to transcribe several of the poems. The contents and dates are as follows.

I (f. 1v-77v): *Silsilat al-dhahab*, Completed in late Sha‘bān 907/early March 1502 by Darwīsh ‘Alī. II (f. 78v-91v): *Salāmān wa Absāl*.

Completed, ostensibly, on the *ghurra* (i.e. 1st) Rabīʿ al-Awwal 807/7 September 1404 by Darwīsh ʿAlī, who in a moment of vagueness put himself in the wrong century; he surely meant 1 Rabīʿ al-Awwal 907/14 September, 1501, but he wrote 807 – in Arabic words, not in numerals (see illustration in Appendix). III (f. 92v-112v): *Tuhfat al-ahrār*. Completed on 10 Jumādā l-Awwal (sic) 907/November 21, 1501 by Darwīsh ʿAlī. IV (f. 111r-147v): *Subḥat al-abrār*. Completed in late Jumādā l-awwal (sic) 908/late November, 1502 by Darwīsh ʿAlī. V (148v-203v): *Yūsuf wa Zulaykhā*. Completed by the anonymous scribe on 16 Rajab 87 (sic), though the actual year seems much more likely to have been 907/25 January, 1502 or 908/January 15, 1503. VI (204v-248v): *Laylī wa Majnūn*. Completed by the same scribe in Šafar (probably Šafar 908/early August, 1502), only the digit 8 being clearly legible. VII (249v-275v): *Khīradnāma-i Iskandarī*. Completed by Darwīsh ʿAlī on 11 Jumādā al-Thānī 907/22 December, 1501.

What emerges from these colophons is interesting as evidence of patterns of copying. Sometimes the determining factor would have been availability of source manuscript(s). This, again, is not in itself sufficient supporting evidence for any attempt to compute work rates more exactly. From the above evidence one can see, at any rate, that copyists did not necessarily transcribe texts in the order they were intended to follow in the completed volume. It seems probable that Darwīsh ʿAlī put the Jāmī assignment aside at some stage, perhaps at the onset of Ramaḍān 907, resuming it in Rabīʿ al-Awwal or Jumādā al-Ūlā 908 in order to finish it late in the latter month, so complementing the work of the other copyist who completed his work in Šafar or Rajab 908. It is also clear that Darwīsh ʿAlī copied *Khīradnāma-i Iskandarī* – but no other poem found in this manuscript – some time between 1 Rabīʿ al-Awwal and 11 Jumādā al-Thānī 907, the most likely reason being that during that period of almost one hundred days he also had other things to do.

The second example is MS. 4039, a copy of *Daftars* III-VI of the *Mathnawī*.¹⁵ The copyist, Maṣṣūr ibn Abī Bakr al-Tustarī, has provided three colophons. These, however, unlike the examples studied below, do not provide a basis for establishing chronology in any detail. According to the catalogue, the completion dates are as follows: *Daftar* III, Saturday Shawwāl 840/early April-May 1437, the day of the month

being omitted; *Daftar* IV, Wednesday Jumādā l-Thānī 840/mid-December 1436-mid-January 1437; *Daftar* V, Wednesday Shawwāl 840/early April-May 1437 (the same as for *Daftar* III, except for the day of the week; our next manuscript also has a repeated colophon date!); *Daftar* VI is incomplete and now has no colophon.

If we hypothesise that there is a scribal error and *Daftar* III was actually completed in Shawwāl 839/late April-mid-May 1436, the above colophons yield the following approximate timings: III, ? days; IV, 250 days; V, 75 days. If, on the other hand, we hypothesise that *Daftar* V was completed in Shawwāl 841/early March 1438, the timings emerge thus: III, ? days; IV, 250 days; V, 340 days. If we take all Maṣṣūr's statements at face value he must have either copied at least two *Daftars* at the same time, alternating between them, or else copied one of them in record-breaking time – outpacing even the copyist of the Paris manuscript whom we shall meet later.

Category 4: 'Intermediary Colophons' Giving Discrete Completion Dates

The first manuscript in this category to be considered here is British Library Or. 14367, which is probably of Ottoman origin and dates from the late 9th/15th century. Since it has only three colophons giving chronological information, more extrapolation is called for than with the other manuscripts in the same category; but it is to be hoped that the more evidence we gather the more useful our generalisations will become, and so this is not a manuscript to be overlooked.

The date at the end of *Daftar* II (f. 81) is 2 Sha'bān 894/1 July 1489; that of *Daftar* IV (f. 168v) is for some unknown reason the same (possibly the copyist realised on completing the latter colophon that he had not completed the former); that of *Daftar* V (f. 214v) is 15 Shawwāl 894/11 September 1489, and that of *Daftar* VI (f. 267r), in which no day is specified, is Muḥarram 895/November-December 1489. Given that the time taken to copy *Daftar* VI was between 74 and 104 days, it seems likely that the date of *Daftar* IV is authentic, in which case it would have taken 72 days to complete. For if the date of the colophon on f. 81 is authentic, the copyist's work-rate for *Daftars* II-V would have been at least three times as fast as for *Daftar* VI – which although not impossible

appears unlikely. The pressure to complete and hand over a commission more often increases than it decreases, as the end approaches, as is evident in manuscripts where the handwriting degenerates, sometimes abruptly, on the later folios.

Total copying time: *Daftars* II-V, 72 days (?); IV, 72 days (?); VI, 74-104 days.

Our second example from Category 4 is another complete manuscript of the *Mathnawī*, this time from the Deccan in India. It was copied by Muḥammad Ṭāhir ibn Qāḍī Muḥammad 'Alī in the citadel of Kundama, which according to the colophon belonged at the time to Sultan Muḥammad of the 'Ādilshāh dynasty. This copy, British Library I.O. Islamic 3270,¹⁶ also provides precise dates for each *Daftar*: I, 12 Dhū l-Qa'da 1066/1 September 1656; II, 13 Dhū l-Hijja 1066/2 October 1656 (see illustration in Appendix); III, 12 Muḥarram 1067/31 October 1656; IV, 7 Šafar 1067/25 November 1656; V, 8 Rabī' al-Awwal 1067/25 December 1656; VI, 6 Jumādā l-Awwal (*sic*) 1067/February 20, 1657. Also noteworthy is the skill with which the scribe used *mis-en-page* expedients, setting lines of text diagonally at regular intervals so as to place the colophon at the very foot of the page (see illustration of the end of *Daftar* 3).

This manuscript, written in a fort but probably not whilst under siege, took roughly twice as many days to complete as the copy to be examined next.

Daftar I, 31 days; II, 29 days; III, 34 days; IV, 30 days; V, 30 days; VI, 53 days. Total: 207 days.

The next example in this category is unusual in several respects. Firstly it is very small, with folios measuring only 114 by 70 mm. Secondly, it contains a number of miniature paintings, which deserve discussion on some other occasion. Thirdly, this copy dates from Shīrāz during the period of Zand dynasty rule, when that city was the Iranian capital; illustrated manuscripts from that era are rare. For present purposes, however, its most significant features are that (a) it has a colophon giving the exact completion date for each of the six *Daftars*; and (b) it was produced while Shīrāz was being besieged by 'Alī Murād Khān.¹⁷ The fact that this is mentioned in almost every colophon implies that the copyist was closely involved with or affected by events around

him. This may have left less scope for him to be diverted, but means it is likely that he was working under unusually stressful conditions.

This volume has other unusual features besides the circumstances of its production: the folios and miniature paintings are diminutive, and the handwriting is unusually poor for an illustrated manuscript. The dates of the individual *Daftars* are as follows: I, Thursday 27 *Dhū l-Qa'da* 1195/29 October 1781, *dar muḥāṣara-i 'Alīmurād Khān*; II (see illustration in Appendix), 26 *Dhū l-Hijja* 1195/27 November 1781, *dar 'ayn-i inqilāb-i muḥāṣara-i 'Alīmurād Khān*; III, 28 *Muḥarram* 1196/13 January 1782, *māh-i haftum-i muḥāṣara-i 'Alīmurād Khān*; IV, 12 *Šafar* 1296/27 January 1782, *Shīrāz dar muḥāṣara*; V, 27 *Šafar* 1296/11 February 1782, *dar māh-i haftum-i muḥāṣara*; VI, Wednesday 14 *Rabi' al-awwal* 1196/27 February 1782, *Dār al-Mulk-i Shīrāz*.

The intervals between the completion dates of the six *Daftars* are as follows, plus or minus one day according to the length of the lunar months.

Daftar I, ?; II, 29; III, 32; IV, 13; V, 15; VI, 16. Total $X + 105$, where probably $X > 13$, $X > 32$.

Next to be considered is a fourth copy of the *Mathnawī* in the British Library, which has just two colophons: I.O. Islamic 1386.¹⁸ *Daftar* III is dated 19 *Dhū l-Hijja* 1029/15 November 1620 (see illustration in Appendix); *Daftar* VI, 27 *Muḥarram* 1030/December 22 1622.

These dates imply that the copyist transcribed the second half of the *Mathnawī*, i.e. *Daftars* IV-VI, in 27 days. This suggests a much faster work-rate than that of the other scribes whose work we have so far discussed. Most unusually, the copyist also states how many *bayts* each *Daftar* contains. Given the extent to which the text of the *Mathnawī* had been corrupted by that time, this is very useful; in the critical editions, the numbers are very different. In I.O. Islamic 1386, *Daftar* I has 3995, II 3895, III 4755, IV 3800, V 4318, VI 5193; giving a total of 26,016 *bayts* – although the same copyist in the last colophon gives the total as 26,242. This compares with a total of about 25,700 *bayts* found in the earlier, far more textually authentic copies.¹⁹

Daftars IV-VI: 27 days for half of the work.

Finally, still in the same category, though in a sense different in kind, is a fine manuscript of the *Mathnawī* (Mxt. 332) preserved at the

Austrian National Library in Vienna.⁴⁰ The major difference is that whereas the handwriting in all the other copies discussed here is rarely better than 'workmanlike', it is clear from the catalogue description that this one is an elegant calligraphic and illuminated copy. One might expect, therefore, that its production would have been a more protracted process. Fortunately the copyist, Sayyid Quṭb al-Dīn ibn Sayyid Ya'qūb al-Muṣṭafawī al-Ḥusaynī, provides a completion date for every *Daftar* but the first. This gives us some idea as to how long one scribe took to produce a calligraphic *Mathnawī*, or rather two-thirds of it: *Daftars* III-VI. The dates are as follows, with acknowledgements to Gustav Flügel, author of the Vienna catalogue.

Daftar I (f. 3v-48v), no date; *Daftar* II (49v-90r), 25 Muḥarram 1091/26 February, 1680; *Daftar* III (90r-143v), 10 Rajab 1091/6 August 1680; *Daftar* IV (144r-187v), 17 Muḥarram 1092/6 February 1681; *Daftar* V (188r-236v), 5 Muḥarram 1093/14 January 1682; *Daftar* VI (237v-293r), Dhū l-Qa'da 1093/November 1682.

Daftar I, ? days; II, ? days; III, 162 days; IV, 184 days; V, 343 days; VI, 290-320 days.

Category 5: Colophons Giving Both Start and Finish Dates

Yet another manuscript of Mawlānā Rūmī's masterpiece preserved at the British Library, this time originating from Sind, contains only three *Daftars*. Its documentary value, however, equals or exceeds that of all the manuscripts so far considered. This manuscript, Or. 16170,⁴¹ was copied by Ḥāfiẓ Muḥammad Muḥsin, a resident of the sub-province of Thatta (*sākin-i ṣūba-i Thatta*), at that time still a place of cultural importance. This man has done the curious-minded an even greater favour than his colleagues, stating precisely when he started and finished each *Daftar*. *Daftar* IV was started on 1 *Rabī' al-Thānī* 1098/18 April 1686 and completed on 5 *Jumādā l-Thānī* 1098/18 April 1687; V was started on 22 *Jumādā l-Thānī* 1098/5 May 1687 and finished on 14 *Rajab* [1098]/25 May 1687; and VI was started on 15 *Rajab* 1098/26 May 1687 and completed on 7 *Sha'bān* 1098/18 June 1687 (see illustration in Appendix).

The colophons show that Ḥāfiẓ Muḥammad Muḥsin took a sixteen-day break from this assignment after finishing *Daftar* IV, which

had taken 61 days; but after finishing *Daftar V* far more expeditiously in 22 days, he resumed his task the next day, completing *Daftar VI* in 21. Comparison shows that the Sindī scribe set a rather slower pace initially but that he later outstripped his colleague in the Deccan.

I: 61 days. II: 22 days. III: 21 days. Total (for 3 of 6 Daftars): 104 days.

Before we finish (for the time being) with the *Mathnawī*, there is, as Déroche has mentioned, at least one other copy that contains a statement as to precisely how long it took to transcribe the entire poem. This is Bibliothèque nationale de France (BnF) persan 266, with 273 folios, all apparently written in just two weeks by *Darwīsh-i dardmand* 'Alī ibn Muḥammad.²² Normally *Darwīsh-i dardmand* would mean "the sorrowful beggar" (or "dervish"); but one wonders whether his *dard* (sorrow or pain) might not have been writer's cramp. At any rate, if this suffering scribe can be taken at his word the pace at which he transcribed the entire *Mathnawī* appears to have been exceptional. None of the other copyists considered here comes close to such a work-rate; nor, understandably, does his namesake the calligrapher 'Alī ibn Muḥammad, who worked on the famous illustrated manuscript of Jāmī's *Haft Awrang* (seven *mathnawī* poems) in the Freer Gallery, Washington, D.C., the subject of an illuminating study by Shreve Simpson and Massumeh Farhad.²³

GENERAL REMARKS AND ANALYSIS

Catalogue references for further *Mathnawī* manuscripts with individual dated *Daftar* colophons may be found in Mehmet Önder et al., *Mevlāna bibliyografyası*, vol. 2 (Ankara 1974), pp. 3-91; this invaluable bibliography of writings by and about Jalāl al-Dīn Rūmī lists 486 manuscripts in all, including commentaries and translations. The union catalogue of Persian manuscripts by Aḥmad Munzawī, *Fihrist-i nuskha-hā-yi khatṭī-i Fārsī*, vol. 4, pp. 3144-3164, describes 373 copies of part or all of the *Mathnawī*. One Ottoman professional calligrapher and author, Cevrī Çelebi (Ibrāhīm Jawrī Chalabī) is said to have copied the *Mathnawī* itself twenty-two times; no less interesting is the report that he sometimes wrote out one thousand couplets in one day²⁴ – at which rate he could have completed the *Mathnawī* in two and a half weeks!

Incidentally, since calligraphy is a living art, it should be possible to learn, by working with practicing calligraphers, how many lines can be transcribed in a day, whether writing in the more cursive *nasta'liq* rather than in *naskhī* script affects the speed of transcription, and so on – just as we are learning about other aspects of the arts of the book both from their contemporary practitioners and from conservators.

In the corrupted later versions of the text discussed here, the *Mathnawī* generally amounts to between roughly 29,000 and 31,000 *bayts*, making an average of about 5,000 per *Daftar*. In all versions of the text, the *Daftars* vary in length. For present purposes this variation has been disregarded, although admittedly if the available data were more extensive it might well become necessary to take account of the fact. The dates and figures cited above suggest (but do not prove) that the copyists produced on average between about 130 and 250 *bayts* or couplets per day, but possibly as many as 900 in the case of the three *Daftars* apparently copied in 27 days – and allegedly nearly 2,000 in the case of the Paris manuscript. Poetry is perhaps easier to copy than most prose, being easier to memorise; but scribes may have been more inclined to suppose wrongly that they had memorised a verse correctly.

To put the above figures in context, there are three final points to be made. As already mentioned, the activities of copyists in 11th/17th century Iran were observed by Chardin, who reported that the maximum number of *bayts* or couplets of verse that they could transcribe in one day was between 500 and 600,²⁵ far below Cevrī's reputed output. Secondly, transcribing the *Mathnawī* normally involved copying not only the 26,000 or so verses but also the six prefaces (*dibācha*), one for each *Daftar* (although there are manuscripts which lack these) and – a much greater task – the often lengthy headings that precede every new story, moral or theme in the poem and the shorter, but numerous, headings that mark the return to it after a digression. While many other lengthy poems in *mathnawī* (rhymed couplets) form also have headings, generally known or assumed to have been composed by their authors, they tend to be much less prolix (or explicatory). Thirdly, some copyists' task was augmented because they added to the text of the *Mathnawī* itself part or all of one of the several commentaries that exist on the meanings of rare or difficult words or expressions in the poem. In any

detailed comparison between copying times for the *Mathnawī*, the exact content of each manuscript must be noted.

The chief obstacle to drawing firm conclusions from the foregoing evidence is the number of variables, for the answers to questions such as the following (except for the last one or two of them) are rarely known. Did the copyist of a given manuscript, work on the manuscripts continuously, every working day, or discontinuously, at the same time pursuing other transcription assignments, or other activities – or enjoying periods of inactivity, forced or unforced? How many hours did he work per day and/or night? (Working by night was of course more difficult and more expensive in the days before artificial lighting.) How legible and accurate was the source manuscript from which he worked? Can one be sure that he was working from only one, or might he in some exceptional cases (as appears possible in the case of some early manuscripts of Rūmī's *Dīwān-i kabīr* or collected lyric verse) have had more than one in front of him, and been making choices between variant readings? How difficult, or unfamiliar, to the copyist was the text being copied? How clear and how elegant is the copyist's handwriting, and in which style of script? How much, for this assignment, did clarity and elegance matter?

CONCLUSIONS

Although comprehensive details remain scarce, there is more internal evidence available about the rate at which copyists worked than one might suppose. All the types of evidence considered have something to teach us about aspects of manuscript production in the Islamic world. Although the figures in themselves prove little or nothing, there is reason to believe that further research might produce a statistically useable body of evidence. To establish an average speed of copying applicable 'across the board' may prove an unrealistic objective, especially given the small quantity of evidence so far. Much more information could be assembled if sufficient research were conducted on a collaborative basis, which would also cast light on other aspects of copyists' working conditions – the theme with which we began – and, perhaps, on the culture of the book in mediaeval Islam more generally.

Meanwhile, it is hoped that the findings presented here will serve to supplement the pioneering work of François Déroche in 'The copyists'

working pace' and *Manuel de codicologie*. A great deal more, however, remains to be done, and it will involve much more than mere statistical analysis. For those interested in the intellectual history and the arts and crafts of the pre-modern Islamic world, this field of research brings together an intriguing range of topics and methodologies.

NOTES

¹ *Manuel de codicologie des manuscrits en écriture arabe* (Paris: Bibliothèque nationale de France, 2000).

² *Islamic codicology: an introduction to the study of manuscripts in Arabic script* (London: Al-Furqān Foundation, 1427/2006).

³ *Al-Madkhal ilā 'ilm al-kitāb al-makhṭūṭ bi-l-ḥarf al-'Arabī* (London: Al-Furqān Foundation, 1426/2005).

⁴ In: J. Pfeiffer and M. Kropp (eds.), *Theoretical approaches to the transmission and edition of oriental manuscripts: proceedings of a symposium held in Istanbul, March 28-30, 2001* (Beirut, 2007), pp. [203]-213.

⁵ C. Rieu, *Catalogue of the Persian Manuscripts in the British Museum*, vol. 1 (London, 1879), p. 176; H. Ethé, *Catalogue of Persian Manuscripts in the Library of the India Office*, vol. 1 (London, 1903), col. 79.

⁶ *Waqf-nāma-'i Rab'-i Rashīdī*, ed. I. Afshār and M. Mīnuwī (Tehran, 1356/1978). pp. 114-115.

⁷ J. Chardin, *Voyage du Chevalier Chardin en Perse et autres lieux de l'Orient*, nouvelle éd. (Paris, 1811), vol. 4, pp. 281-282.

⁸ S. Vahidov and A. Erkinov, 'Le *fihris* (catalogue) de la bibliothèque de Šadr-i Dhiyā: une image de la vie intellectuelle dans le Mavarannahr (fin XIX-début XX siècle)', *Cahiers d'Asie Centrale*, 7 (Paris, 1999), pp. 141-173.

⁹ U. Derman, *Letters in Gold: Ottoman calligraphy from the Sakıp Sabancı Collection, Istanbul* (Los Angeles, 1998), p. 62.

¹⁰ Déroche, 'The copyists' working pace', p. 210.

¹¹ M. I. Waley, *Supplementary Handlist of Persian manuscripts in the British Library, 1966-1998* (London: British Library, 1999) p. 49; there is also an unpublished catalogue description. Most of these treat-

ises have been published in *Chahārdah Risāla-i Fārsī-i Šā'in al-Dīn 'Alī bin Muḥammad Turka Iṣfahānī*, ed. Sayyid 'Alī Mūsavī Bihbahanī and Sayyid Ibrāhīm Dibāji (Tehran 1351/1972-3).

¹² R. Vassie, *A Classified Handlist of Arabic Manuscripts acquired since 1912, volume II: Qur'anic Sciences & Hadith* (London, 1995), p. 51.

¹³ Ibn Yūsuf Shīrāzī, *Fihrist-i Kitābkhāna-i Majlis-i Shūrā-yi Millī*, vol. 3 (Tehran, 1318-21/1939-41), p. 646. On pp. 641-648 the cataloguer describes several copies of the *Mathnawī*, drawing attention to any interesting details; pp. 648-650 are devoted to a brief essay (rarely found in a general catalogue of manuscripts) on questions relating to the poem and its text, in which Ibn Yūsuf notes *inter alia* the wide variation in the number of couplets in different manuscripts.

¹⁴ Aḥmad Munzawī, *Fihrist-i nuskhā-hā-yi khaṭṭī-i Fārsī*, vol. 4, pp. 3144-3164.

¹⁵ Iraj Afshār, Muḥammad Taqī Dānishpazhūh and 'Alīnaqī Munzawī, *Fihrist-i Kitābkhāna-i Majlis-i Shūrā-yi Millī*, vol. 11 (Tehran, 1347/1968), p. 42.

¹⁶ H. Ethé, *Catalogue*, vol. 1, col. 634. According to the description of I.O. Islamic 2875, another *Mathnawī* manuscript from India, it provides an example of another type of chronological data in addition to colophons, this time introduced by a former owner of the manuscript.

¹⁷ For the historical background, see J. Perry, 'The Zand Dynasty' in *Cambridge History of Iran*, vol. 7 (Cambridge, 1991) pp. 63-103; and for this episode itself pp. 93-4.

¹⁸ H. Ethé, *Catalogue*, vol. 1, loc. cit.

¹⁹ S. Ceyhan, 'Mesnevī', *Türk Diyanet Vakfı slām Ansiklopedisi*, 20 (Ankara, 2004), pp. 325-334.

²⁰ G. Flügel, *Die arabischen, persischen und türkischen Handschriften der Kaiserlich-Königlichen Hofbibliothek zu Wien*, Erster [1.] Bd. (Vienna, 1865), no. 522, pp. 517-518.

²¹ Unpublished catalogue entry by M.I. Waley.

²² F. Richard, *Catalogue des manuscrits persans: ancien fonds*, vol. I (Paris, 1989), p. 277; also *Islamic Codicology*, p. 197.

²³ Marianna Shreve Simpson (with contributions by Massumeh Farhad), *Sultan Ibrahim Mirza's Haft Awrang: a princely manuscript*

from sixteenth-century Iran (New Haven & Washington, DC, 1997).

²⁴ See the *Tezkire* of Safā'ī (Istanbul University Library MS. TY 3215, f. 63r) cited in Hüseyin Ayan, 'Cevrî İbrahim Efendi', *Türk Diyanet Vakfı İslam Ansiklopedisi*, vol. 7 (Ankara, 1993), pp. 460-1. Cf. E.J.W. Gibb, *History of Ottoman Poetry*, vol. 3 (London, 1904), p. 297, where no source is cited. E.G. Browne, who edited this work, notes (*ibid.*) that in Gibb's manuscript the saying *Kull khattāt jāhil* ('Every scribe is an ignoramus') has a pencilled reference to two Ottoman books: Habib's *Hatt ü hattātān* (an account of calligraphers), p. 235, and Ali Enver's *Semā'hāne-i edeb* (on poets of the Mevleviye Sufi Order), p. 41.

²⁵ Chardin, *Voyage*, loc. cit.

*The Paper Trade on the Red Sea
(19th c.-first half of the 20th c.):
'Local' vs. Italian Paper
The case of an 'Ottoman' watermarked
paper used in Yemen and in Ethiopia'*

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INTRODUCTION

THERE IS NO DOUBT for the codicologist as to the supremacy of Italian paper in the 19th c., particularly from Veneto (Friuli), as the material of choice for manuscripts in the Arab or African world. Works by Terence Waltz have demonstrated this for Egypt and Sudan¹. In Yemen and in Ethiopia, the study of manuscript paper confirms the strong presence of Italian papers². In Sub-Saharan Africa, there is evidence of much the same for Nigeria or thanks to manuscript collections gathered in West Africa³.

All along the 19th c., as the Industrial Revolution was in full swing, production techniques evolved and the movement began to affect paper production, starting from the 1820s, be it for wallpaper or writing paper⁴. The balance of power also changed in the region as the achievements of engineers turned the Red Sea into the preferred means of communication between the Mediterranean Sea and the

Indian Ocean: the British presence, especially in Aden, from 1839 to 1967, has to be taken into account, as well as the consecutive appearance of the steam boat, requiring its own logistics, and the opening of the Suez Canal, in 1869; the second Ottoman occupation of Yemen took place from 1872 to 1919 and met some resistance in the Tihāmah, the part of Yemen which runs along the Red Sea⁶; finally, the Sykes-Picot Treaty led to the dividing up of the Ottoman Empire between the French and the British, in 1916. In the Red Sea zone, which will be the focus of this paper, Italian supremacy however, did not prevent on the one hand, the import of other European papers, from France, Britain, or Austria, nor on the other hand, those papers referred to as 'local' (as opposed to the former). Among these, and during the same period, are papers produced in Egypt, India, whether watermarked or not⁷, or in Turkey. By way of example, "Ledger" paper is found in the manuscripts of Zabīd in the Tihāmah (m/h 29, copied in 1369/1949-1950), as well as in Ta'izz at the library of the Hā'il Sa'īd Foundation, a robust paper, much valued for accounting books. The case is different for India, because its commercial and community ties with Yemen date back centuries, the presence of Indian paper is linked to the capacity to locally produce paper or not. Several Indian papers have been recorded in Ṣan'a' and in Zabīd, e.g. a paper refers to Bombay in its countermark (Mumbai, m/h 38, copied in 1334/1915-1916). In the second half of the 20th c., an Egyptian paper factory is said to have exported its paper to India, the Hijaz, Yemen, Northern Africa and even Europe⁸.

As for Turkish paper, over the last few years, it has gained a lot of attention from researchers. Generally speaking, the presence, in Arab manuscripts, of watermarked paper made in Ottoman Turkey according to an Italian technique, from the early 19th c. to the mid-20th c., has already been verified⁹. Ş. Tekin reproduces several of them, at least one of which is dated 1219/1804-1805. This one is an ensemble made up of a crescent enclosing an eight-pointed star and of a countermark in osmanlı, *İslāmbôl sene 1219*¹⁰. More recently, *Abū Şubbak* paper has been found in Yemen¹¹. However, our knowledge of such papers is far from complete.

OVERVIEW OF PAPER-MAKING IN
19TH & 20TH C. TURKEY

To date, few studies relying on primary or secondary sources have been devoted to the paper-making industry in Turkey. Based on the few well-known publications, it appears production was irregular, for various reasons, not necessarily linked to the international context or to economic competition.¹² For the 19th and the beginning of the 20th c., and the types of paper which concern us,¹³ O. Ersoy and M. A. Kâğıtçı mention the following paper mills and factories:

- the Hünkâr İskeleyi mill, located in Beykoz, on the eastern shore of the Bosphorus in 1803, and fully operational at least until 1832. As the watermarked paper bearing the crescent and star with a countermark in osmanlı, has just been mentioned, we will not go into it further¹⁴;

- the steam-powered paper mill of Halkapınar in İzmir (Smyrna), established in 1846, equipped with machinery for continuous paper production from the British Bryan Donkin Company¹⁵. Its raw material was rags. However, it does not seem to have survived very long and appears to have succumbed to importers dumping paper on the Ottoman market;

- the Hamidiye (Hamidiye Kâğıt Fabrikası) paper mill in Beykoz, named after the river running through it. It was born at the very end of the 19th c. officially 14 September 1886. Permission to print was granted (*imtiyaz*) for fifty years to Osman Bey, Sultan Abdülhamid II's chamberlain. The paper mill was considerable in size and powerfully equipped with 4 English paper machines by Masson Scott & Co, a large workshop for cutting and finishing paper, as well as a thermal power plant. Straw and rags were its raw materials.¹⁶ It ceased to function around 1915 when the Ottoman Empire sided with the Germans, causing the British engineers to depart;

- finally, Anatolia, bastion of the modern papermaking industry, took over the manufacture of cellulose pulp and paper. The five-year plan of 1933-1938, called for the creation of a great paper mill¹⁷. An initial paper mill opened in İzmit in 1936¹⁸; others would appear in Aksu, Dalaman, Afyon, Balıkesir, Kastamonu.

This preliminary overview, although extremely interesting, nonetheless remains incomplete, as the various Turkish local archives have not been the subject of extensive exploration yet. Authors who have addressed the history of Turkish papermaking figured competition pitting Turkish papermaking against European papermaking had led to the imitation or "borrowing" of Europeans watermarks (especially Italian and Polish) by the Turks, on, but regretted their inability to demonstrate this⁹.

Should someone now want to look into the trading of Turkish-made paper, and more specifically, its export, and then piece together the trade routes by which it was shipped, the problem will remain the same, as long as we do not have, as in this case, more data from sources such as the archives stored at the Başbakanlık, the archives of paper-makers or of locals¹⁰. To which must be added the country's archives under Ottoman rule and those of Italian paper-makers, which should be studied from that angle. As for the different memoirs in the wake of Napoleon's expedition, traveller's tales, studies, etc., regarding trading on the Red Sea, their sorting has, for the moment, yielded only haphazard information, often hard to interpret or comment on¹¹.

It is however possible to proceed otherwise, whilst we wait for these future studies to be carried out, but also in order to increase and crosscheck our data. Indeed, a trace of imported papers is kept, ultimately, in the manuscripts of those countries importing the paper. Let us refer to these as 'destination' papers. Hard data can thus be obtained, informing about the production of a given paper, its export and arrival to a particular destination at one point in time. Dating the production of the paper based on such data should nevertheless take into account the fact that date brackets are based on its use by copyists. However, a paper can be stored for an extended period before being used¹². The time taken by its transport should also be added on. A significant correction in dating the production of a paper based on this material can be obtained by adopting a statistical basis.

METHODOLOGY, CODICOLOGY & HISTORY

As early as 1985, in his previously mentioned article, Terence Waltz opened the way to working on the paper trade based on watermarked papers, in his case, those he had documented predominantly in archive documents. This was initially a study meant for a collective work on Sudan. This remarkable work did not immediately attract much of a following. In "Les routes commerciales entre Zabīd et l'Europe: les papiers filigranés de fonds manuscrits de Zabīd (Yémen, fin 18^e-milieu 20^e s.)" ["Trade Routes between Zabīd & Europe: Watermarked Papers from Zabīd's Manuscript Collections (Yemen late-18th-mid-20th c.)"], we made an initial attempt at establishing this inaugural work as a method²³.

The method thus defined implies a considerable epistemological leap: papers from manuscripts are to be treated as a primary source. The status of papers makes them no longer just a means of dating and locating manuscript production in which they were used, but an actual datum in the history of the trade, of the migration of ideas and people. This posits that studying the papers allows us to identify the paper mill of origin and therefore the place where it was made, an operation which supposes the existence of means to document this. It requires a careful selection of the manuscript by making sure that, as initial criteria, the copy date is correct and that we are able to locate where the manuscript was copied. Only then can the paper be classified as "destination paper". Finally, it demands creating statistical clouds on the use of a given paper.

The task of identifying the papers, the time between the production of a paper and its use, is already part of the work carried out by a codicologist. What changes here is the end-goal: it is no longer solely about dating and locating the paper, but about studying the paper trade, i.e. identifying exported papers and their destinations, their prices, their processing, the networks and buyers, tradesmen, competition, how they were shipped and along which supply routes. In this search, manuscript papers are a seldom used and promising source, to which findings from other sources must be added.

If we are to follow this path, where should we turn to in order to

find exported papers of Turkish manufacture? Inevitably, the Ottoman administration, well-known for being a "paper glutton", springs to mind. An initial set of data was provided by Nikolaev, Velkov and Andreev, who published four volumes of watermarked papers from Ottoman archives kept at the National Library in Sofia²⁴. The presence of papers of Ottoman origin, concurrently with papers of other origins, is confirmed for the period between the 16th c. and the 18th c.²⁵. Unfortunately for our study, the two authors' selection does not go beyond archive documents dated 1820²⁶.

At the same time, research on watermarked papers used in codices has made progress and identified a paper referred to as "Ottoman", found in Yemen. It is this paper, present from the early 19th c. to the mid-20th c. that we will focus on.

Finally, generally speaking, working on the dating and provenance of modern and contemporary Arab codices becomes a necessity, as their predominance has been observed: on the one hand, they are the ones which have been passed down to us, but for certain regions, such as Africa, manuscript production (be it codices or merchant accounting books) witnessed a boom in the 19th c., as a result of the increased presence of paper²⁷. In Yemen, based on the samples we got to see in Zabīd, Ta'izz and Shibām (Hadramawt), the bulk of manuscript production preserved today dates back to between the 17th c. and the 20th c.

An Ottoman Paper

In 1997, Geneviève Humbert pointed out for the first time, the presence of an Ottoman paper in Yemen. Two of the fourteen manuscripts she had studied, at the Aṣā'ir library in Zabīd, were written on a watermarked paper with a lunar profile, bearing a countermark, in osmanlı writing: "*Beyaz Abū* (sic) *Şabbāk Stambūlī*" ("paper by Abū Şabbāk of Istanbul")²⁸.

Since then, in the same town, examples of watermarked papers, sporting a crescent moon face inserted in a double-rimmed shield and bearing the countermark:

[1st line] *Beyāḍ Abū* (sic) *Şubbak İştambūlī* (بياض ابى شىك اسطنبولى);

[2nd line] '*ālī aṣīlī*' (عالي اصيلي) ²⁹ have been recorded.

Zabīd's wealth of ulama libraries can be explained by the important part it played in religious transmission, from the 11th c. to the 20th c^o. In 2006, we pointed out four examples of it³¹:

1. The first one can be found in manuscript m/ḥ 1 in 'Abd al-Rahman al-Hadhrāmī's library, colophon dated Dū al-qa'ada 1375/1956 by copyist Muḥammad Ismā'īl Ḥalīl.

2. The second is a single folio from codex 11 of collection (*maḡmū'*) m/ḥ 7, 25 x 17.5 cm in size, belonging to the same library and written mostly on an Italian paper (Galvani); in the margin a comment dated 1303/1885-1886 can be found.

3. The third example appears on a single folio a chiromancy text was recorded on, belonging to Aḥmad Ġa'far's library, Zabīd. Its size making it possible to see, at the same time, the watermark and its countermark.³² The presence of the countermark also makes it possible to specify the orientation of the crescent, facing right.

4. Finally, we indicated that in 2006, the most ancient copy on *Iṣṭambūlī* paper we had found in Zabīd dated back to 1214/1799-1800.

In 2008, we published a fifth example of this paper, used as a fly-leaf for codex m/ḥ 17 in 'Abd al-Rahman al-Hadhrāmī's library, colophon dated Dū al-ḥiḡga 1192/1777-1778³³. As the cataloguing of manuscripts from this library progressed, occurrences of it kept on multiplying: codex m/ḥ 35 (copy dated 1358/1939-1940), 47 (undated copy), 12 codices out of the 13 in collection (*maḡmū'*) 50 (copies dated 1330/1911-1912 to 1361/1942-1943), codex 60 (copy dated 1263/1846-1847)³⁴, 66/1 (copy dated 1328/1910-1911)³⁵. Today, the presence of "*Abū Šubbak*" paper is confirmed in manuscripts from several regions of Yemen. In 2007, a book manuscript consisting of 84 folios, written on "*Abū Šubbak*" paper dated 1316/1899, was documented in Ṣan'a', in the private library of 'Abd al-Ḥalīq b. Ḥusayn al-Maḡribī, the descendant of a well-known Yemeni family of scholars³⁶. About a hundred papers have been sketched free-hand at Dār al-makḥṭūṭāt, Ṣan'a', between 2009 and 2010, among which the paper which interests us. This public library acquires its manuscripts mostly through donations and purchases. They may thus originate from different parts of Yemen, but, to be sure, the capital's surround-

ing area make for a regular source. In October 2010, twelve of the 97 manuscripts examined by me, out of a total 334 in the possession of the Hā'il Sa'īd Foundation, in Ta'izz, contained *Abū Šubbak* paper; they bear the following shelf marks: ms. 27, 51, 57, 70, 71 à 75, 97 (Qur'an), 106 and 107; only two of the texts show a colophon date, these are ms. 27, copied in 1073/1662-1663, and ms. 107, copied in 1328/1910-1911³⁷. In the first case, the presence of this paper at that early period can be explained by the fact that it was used as flyleaf. This initial data already points to a trend which growing interest in the study of Yemeni papers should reinforce, showing an increasing number of examples in the future and demonstrating, eventually, that it was in fact a very widespread product.

Aside from these statistical indications, already quite eloquent, the name of the copyists or the copy place of at least 4, probably 5, manuscript codices written on *Abū Šubbak* and belonging to 'Abd al-Rahman al-Hadhrami's library, show that this paper was indeed imported into Yemen and reached Zabīd³⁸.

Outside of Yemen, a study based on scriptural sources, mentions as early as the late 60's, the existence of an "*abu shibbāk*" paper among European imports to eastern Sudan, at the end of the 19th c.³⁹. Very recently, *Abū Šubbak* paper was mentioned in the Far East: firstly, in January 2010, in a *fiqh* manuscript from the Regency of Aceh Besar, North of Sumatra, acephalous and with the last part of the text missing; then, between January and October 2010, in a codex (several codices?) kept in Indonesia. These are manuscripts in Arabic which, according to today's research, are not prior to the 19th c.⁴⁰. Such manuscripts possibly having been imported, particularly from Yemen and more specifically from Hadramawt, it is too soon to assume this paper was circulated in the specified zone⁴¹. *Abū Šubbak* paper can still be found in codices in Arabic kept in Ethiopia⁴². Ms. BNF 7264 contains two codices, probably copied in Ethiopia, in 1345/1926-1927⁴³. Indications at hand regarding the provenance of these collections, to which palaeographical data is added, allow us to posit, at least for some of the codices concerned, that they were copied in Ethiopia, more often than not in Harar.

In the geographical area we have just covered, *Abū Šubbak* paper

is present over a period from the very beginning of the 19th c. through to the mid-20th c. The brand "*Abū Šubbak*" has lived on in Yemeni memories to this day, as a synonym for excellent paper, sturdy and long-lasting, recommended as such when drawing up legal documents. This is what the term *beyaz* (instead of *kāğıt*), which in osmanlı is used to speak of paper used for the final versions of documents as opposed to draft paper⁴⁴, would lead us to believe. Its sturdiness also explains its frequent use as a flyleaf for manuscripts⁴⁵. In the 2000's, we got to buy, at the souk in Zabīd, "an *Abū Šubbak*", i.e. a complete sheet of non-watermarked paper⁴⁶.

First attempt at classifying Abū Šubbak papers: Beyāḍ Abū Šubbak and Warāq Abū Šilubbāk papers

As demonstrated, *Abū Šubbak* paper was widespread, from the 19th c. to the 20th c., at least in Yemen and in Ethiopia. Fortunately, it is much easier to classify than the *Tre Lune*, a watermarked paper very frequently found in codices as well as in archives⁴⁷.

To this day, two main groups of *Abū Šubbak* papers have been detected, the *Beyāḍ Abū Šubbak* papers, and the *Warāq Abū Šilubbāk papers*. This is only an initial attempt: neither this list, nor, more specifically, the use periods worked out for the paper, can be considered definitive.

I. *Beyāḍ Abū Šubbak Papers*

The first group of papers is the one for which we have much the most statistical information at present.

Type A

Paper watermarked with a crescent moon face inside a double-rimmed shield and bearing the countermark: "[1st line] *Beyāḍ Abū* (sic) *Šubbak Ištambūlī* (بياض ابوشبك اسطنبولي) ; [2nd line] *‘ālī aṣīlī* (عالي اصيلي)"⁴⁸.

Type A.1.

This is by far the most common. It differs from type A.2. by the dimensions of the shield bearing a crescent moon face, as well as by

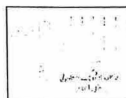
the length taken up by the 2nd line of the countermark. Another difference, very useful for sorting paper types at a glance, resides in a sort of “defect” located on the last term of the countermark “*aṣīlī* (اصيلي)”: the ligature between the first *yāʾ* and the *lām* is only partially present. Given the frequency of the defect, it is unlikely to be due to some pulp adherence, more probably to how the countermark was set up on the grid.

This type comprises ms. m/ḥ 149 and 5 codices out of the 13 in collection (*maḡmūʿ*) m/ḥ 50 from ‘Abd al-Rahman al-Hadhrami’s library (ill. 1.a, 1.b, 1.c; ill. 1.bis).

| # of manuscript in collection (m/ḥ) | Copy date in chronological order crescents | Maximum sheet dimensions (cm) | #20 laid lines measured from the outer edge (cm) | Spacing between 2 chain lines measured from the inside edge (cm) |
|-------------------------------------|--|-------------------------------|--|--|
| m/ḥ 149 | 1111/1112-1113 | 21 x 18 | 3-3.1 | 25 |
| m/ḥ 149.1 | 1111/1112-1113 | 21 x 18 | 3-3.1 | 25 |
| m/ḥ 149.2 | 1122/1116-1117 | 22.5 x 18 | 3-3.1 | 24 |
| m/ḥ 149.3 | 1136/1111-1118 | 21 x 18 | 3-3.1 | Alternating double chain, 1.4-2.5 |
| m/ḥ 149.4 | 1138/1111-1140 | 21 x 18.5 | 3-3.1 | Alternating double chain, 1.4-2.5 |
| m/ḥ 1 | 1175/1156 | 24 x 17 | 2.8 | Alternating double chain, 1.4 ¹⁶ |



Ill. 1.a



Ill. 1.b



Ill. 1.c



Ill. 1.bis

The document of Aḥmad Ġa'far (Zabīd) should be added to this list, with the same spacing between two chain lines and the same measure for 20 laid lines as m/h 1.

Based on the copyist's identity for m/h 1 and 50/3, the paper had made its way to Zabīd.

The paper in manuscript ms. Arabe BnF 7264, previously mentioned, can be added to this category. Maximum sheet dimensions are 35.2 cm x 23.1 cm. It has a yellow appearance and its edges have gone brown. The entire manuscript was copied out on this A.1 type of paper. The first text, untitled, is made up of 3 folios, and bears the colophon date of 1345/1926-1927. The copying of the second work, the *Kitāb Nabīh al-anām wa-shifā' ilā saqqām fī bayān 'ulū Maqām nabīnā Muḥammad 'alayhi afḍal al-ṣalā wa-azkā al-salām* by 'Abd al-Ġalīl ibn Muḥammad b. 'Aṭūm al-Qayrawānī al-Muradī, was completed, on 185 folios, in Dū al-qa'ada 1345/1927⁵¹, i.e. the same year as the first text. The manuscript circulated in Ethiopia, as indicated by a note in Amharic. This is not sufficient to make it the place where it was copied⁵². Common traits with Yemeni manuscripts can be noticed, such as the *taṣliya* perpendicular to the triangular colophon.⁵³ But it does seem more likely that it was copied out in Ethiopia, especially given its dimensions.

The paper from ms. Arabe BnF 7084, a collection of poems from the Colin collection, also belongs to this category⁵⁴. The title page bears a purchase title: "Ṣan'a Déc. 1929 / bought 18 Riyāl = 18x12 = 216 frcs / about 800 pages (400 folios)"⁵⁵. Moreover, on folios 133v-135r, a poem of *madaḥ* type congratulates the Ottomans, i.e. Mustafa Kemal and the Sultan, for their victory on the Greeks, which took place in 1340/1921-1922. This poem is followed by a controversy on qat consumption from folios 135r to 138v dated 1340/1921-1922. Finally, between folios 226 and 227, a loose calendar sheet can be found, dated 8th Rabī' al-aḥar 1330, i.e. 1912, and, between fol. 328 and 329, a loose printed form both in French and in Ottoman used to send telegrams: the pre-printed date, without its unit, to be filled in on the form is 192... The manuscript could be a holograph. All these data allow us to admit that it could not have been written on a short term. Folio dimensions are 245 x 180 mm. Spacing between two chain lines

measured from the inner edges is 2.5 cm, the chains are simple. Twenty laid lines measured from the outer edges cover 3.4 cm.

The use range obtained for this paper encompasses a period from 1345/1926-1927—maybe 1330/1912—to 1375/1956 for Yemen, with maybe a peak in 1345/1927 for Ethiopia.

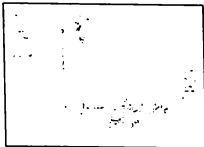
Type A.2.

Regarding type A.2., for the moment we have instances of it going from 1263/1846-1847 to 1355/1936-1937, i.e. a range of almost one century.

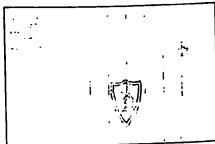
Found in 'Abd al-Rahman al-Hadhrami's library in Zabīd (ill. 2, 3):

| # of manuscript in collection (m/h) | Copy date in chronological order (corresponds) | Maximum sheet dimensions (cm) | #20 laid lines measured from the outer edge (cm) | Spacing between 2 chain lines measured from the inside edge (cm) |
|-------------------------------------|--|-------------------------------|--|--|
| m/h 60 | 1345/1926-1927 | 21.5 x 18 | 3-3.1 | 2.5-2.7 |
| m/h 69 | 1330/1911-1912 | 21 x 18 | 3-3.1 | Abnormality: 36 dots, 2.5 |
| m/h 70 | 1355/1936-1937 | 22.5 x 18 | 2.8-2.9 | 2.5 |
| m/h 82 | undated | 24.5 x 18.5 | 2.9-3.1 | Abnormality: 36 dots, 2.5-2.6 ¹⁰ |

Ill. 2



Ill. 3



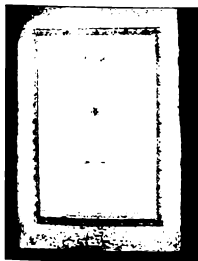
A difference between papers put together under type A.2 can be noticed. It is more of a sensory nature. Paper m/h 60 is dark and brittle, whereas the other occurrences are slightly yellow. Pending more in-depth investigation, we would emphasise the fact that ms. m/h 60 is the most ancient. This could be the result of more advanced decomposition. Walz notes: "Glazed papers preserved in the *Mahkama* dating

from the sixteenth century look today as if they had been written on only very recently. Unglazed paper has turned brown and brittle"³⁷. This is based on the fact that imported paper could be prepared on site, as was the case in Egypt in the 19th c. Although it was used for codex production A.2. therefore seems to be of lesser quality.

Given the dating bracket for type A.2. as it has been established, based on a limited statistical basis for the moment, and for the first two examples, due to their sensory appearance, we would tend to put in this category the papers from the following manuscripts, until a full examination is carried out:

- Zabīd, m/h 66/1, copied in 1328/1910-1911, maximum folio dimensions = 23 x 17.5 cm (82 fol.), copyist born around Ta'izz;
- Ta'izz, manuscript 107, copied in 1328/1910-1911, and kept at the Hā'il Sa'īd Foundation;
- Šan'a', manuscript copied in 1316/1899 and kept at 'Abd al-Ĥāliq b. Ḥusayn al-Mağribī's private library, maximum folio dimensions = 24.5 x 17.5 cm.

Type B. Paper from the Al-Ĥizāna al-'Āmira Catalogue³⁸



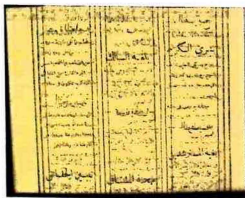
Al-Ĥizāna al-'āmira is a library founded by Imam Yaḥyā b. Muḥammad b. Yaḥyā Ḥamīd al-dīn (1869-1948) in the Great Mosque in Šan'a'. Its catalogue, the *Fihrist kutub al-ḥizāna al-mutawakkiliyya al-'āmira bi-al-ḡāmi' al-muqaddas bi-San'a' al-muḥammiyya*, has been printed out several times (ill. 4)³⁹. We personally know of the existence of printouts in 1312/1894-1895 and in 1361/1942, both coming from the same – Yemeni – printing presses.

III. 4

Generally speaking, it is interesting to note that the print copy in our possession, that of 1312/1894-1895, was dealt with as if it were a manuscript. First of all, a black border frames the area for writing. If we are to believe what is left of the binding, a printed piece of cloth was



Ill. 5



Ill. 6

measured between the inner edges, is 2.4 cm, while spacing between 20 laid lines is 3 cm, between the two outer edges. There is a system of alternating double chains. The paper has a slightly yellow appearance

Ill. 7.a, 7.b



affixed on the back of the book and kept in place by a glued paper strip, on top of which was sewn a headband made of two coloured threads (red & white). It is the paper of this initial printout which we propose to study⁶⁰.

This is a paper with a crescent moon face inserted into a double-rimmed shield and bearing the countermark: "[1st line] *Beyād Abū* (sic) *Šubbak Ištambūlī* (بياض أبو شبك اسطنبولي);

[2nd line] *‘ālī ašīlī* (علي اصيلي)". A loose bifolio allows us to see that the crescent is facing right. Spacing between two chain lines,

(ill. 5, 6).

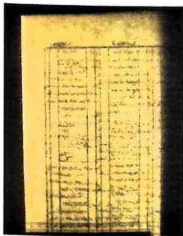
Traces in the shape of a series of short, oblique lines all along the top edge of the folios, show up regularly on this paper (ill. 7.a, 7.b). They suggest it was made as continuous paper, by means of a cylinder, on which was installed the grid:

they represent the butt joint system of both edges of the metallic grid. The chain lines are installed perpendicularly to the axis of the cylinder. The first documented machines with cylinders for the making of watermarked paper date back to 1826, then went on to evolve⁶¹.

The distance between two consecutive traces left by the butt joint of both edges of the metallic grid gives us the circumference of the cylinder. Dimensions of a bifolio from the catalogue are 36.4 x 46.9 cm height by width. The watermark is located on the right-hand side of the bifolio and the countermark on the left-hand side, the first line of text is placed slightly higher than the top of the watermark (ca. 2 cm). On each sheet of the work, either the watermark or the countermark is visible, i.e. no folio is exempt of either one or the other mark. The butt joint trace, when it does show up, is either located north of the watermark and countermark, or south of them; otherwise, watermark and countermark are present without the trace. This allows us to work out that the circumference of the cylinder is approximately $36.4 \times 3 = 109.2$ cm, which means a diameter of about 35 cm.

Moreover, we can observe a series of dotted lines on a considerable number of sheets, sometimes with a diagonal line. These marks were made when the pulp was still damp, in much the same way as the watermark, countermark and butt joint marks. They are very close to the sheet edges – top / bottom – and run parallel to them or merge. They always start from the outer edge of the sheet and are only visible for a

short distance, 2 cm at the very most (ill. 8). They could represent pre-cutting of the paper roll into sheets. On one of the edges, top or bottom, of a certain number of folios, we can observe butt joint marks and dotted and oblique lines on the opposite edge (see for example p. 46). If our interpretation of the dotted and oblique lines is correct, this would confirm that, for the length of watermarked paper made by the turn of a roll, more than one sheet can be obtained. Moreover, these marks would be an additional clue to the mecha-



Ill. 8

nised production of this paper made as a continuous paper. Finally, the format of the Catalogue would be that of a pre-cut sheet.

The pulp was the subject of an analysis by optical microscopy⁶². It is a bleached chemical pulp with a resiniferous base, and a high proportion of spruce, and deciduous trees, particularly poplar and beech. The presence of annuals is also confirmed (straw, linen, hemp) by their strong traces⁶³. The pulp underwent a mechanical treatment, observable in terms of fibre cut, fibrillation, swelling of the fibrous wall and by the presence of numerous fine elements. Damage to the fibrous wall makes identifying the ingredients difficult. The paper is soft to the touch.

II. The *Waraq Abū Šibbāk/Šubbāk* Papers

Compared to the former, the second group is, to this day, the least well represented of the two.

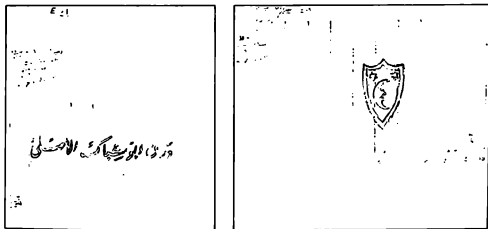
Type C. Le Papier *Waraq Abū* (sic) *Šibbāk al-Ašīlī*

Manuscripts m/h 35 and 50 from 'Abd al-Rahman al-Hadhrami's library were written on a watermarked paper, sporting a crescent moon face, both left and right of the top half, two six-pointed stars, inserted into a double-rimmed shield, and bearing, on a single line, the countermark in Arabic and Arab writing: "*Waraq Abū* (sic) *Šibbāk al-ašīlī* (ورق ابو شيباك الاصيلي)" ⁶⁴. Watermark and countermark appear on the same bifolio, the dimensions of which are indicated for each example. Chains are double and alternating, 2.4 cm can be counted between the inner edges of two chains and 2.7 cm between the outer edges of 20 laid lines.

Ms. m/h 35 contains a manuscript copy dated 1358/1939-1940. It is made up of a total of 7 folios, and consists of one ternion + 1 folio. Maximum sheet dimensions are 24.5 x 18 cm⁶⁵.

Three of the 13 codices in collection (*majmū'*) 50 were written on the same paper, 50/6, s. d., 50/7, colophon dated 1356/1937-1938, and 50/10, colophon dated 1361/1942-1943. Manuscripts 50/6 and 50/10 were most certainly copied in Zabīd, judging by the copyists' names.

Codex 50/6 is made with a quaternion, codex 50/7, of 2 quinions



Ill. 9.a, 9.b

+ 1 folio, finally, codex 50/10 is made with a quinion + 1 ternion + 2 loose folios. Maximum folio dimensions are the same, 24 x 18 cm (ill. 9.a, 9.b)⁶⁶.

We can observe that, none of the codices have type A papers used concurrently with this one, whereas it's not rare to find codices written on different papers.

At the Hā'il Sa'īd Foundation's collection, ms. 51 was written on a paper bearing the countermark "*Waraq Abū* (sic) *Šubbāk al-ašīlī* (ورق أبو شباك الأشيلي)". However, information concerning the laid lines and chain lines was not recorded. The manuscript is not colophon dated⁶⁷.

Finally, the "*abū šubbāk*" noticed by T. Walz is mentioned for Eastern Sudan at the end of the 19th c., however we have no additional indication about it.

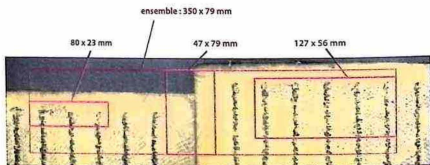
Type C paper has, for Yemen, a use range, going from 1356/1937-1938 to 1361/1942-1943.

Type D. The *Waraq Abū Šubbāk/Andrea Galvani* Paper

This is a paper watermarked with a crescent moon face inside a double-rimmed shield and bearing two countermarks: on the right-hand side, over two lines, in Italian and with Western letters, [1st line] "*Andrea Galvani* [2nd line] *Pordenone*"; on the left-hand side, on one line, in Arabic and with Arab letters: "*Waraq Abū* (sic) *Šubbāk*



Ill. 10.a



Ill. 10.b

(وَرَقَ أَبُو شَبَّاح) ⁶⁸. The crescent moon face is facing left. Both counter-marks are in front of the crescent, the text in Arabic located at the same height as the interval between the two lines of Italian text. The inner gap between two chain lines is 2.5 cm and the distance measured from the outer edges of 20 laid lines, 3.1 cm. Double-chains are noted.

Only two occurrences of this paper have been recorded, both of them found in the manuscripts consulted at the Institute for Ethiopian Studies (IES), in Addis Ababa (Ethiopia), ms. 4574 (18) and 4627.

Ms. 4574 (18) is a collection made up of two codices. The first one, consisting of a single quaternion, has a text without any title, nor colophon; numerous commentaries appear in the margins. This is the one written on type D paper (ill. 10.a.; 10.b.). Maximum folio dimensions are 24.5 x 18.5 cm. It is difficult to tell the number of the quires in the second bulkier codex⁶⁹. The text bears a colophon, indicating precisely the copyist's name, Muḥammad b. 'Arab ('Arib?) al-A.r.k.(b.)ī nāhiyatān al-Aykbarī qariyatān al-šāfi'ī maḡhabān al-aš'arī

ṛtiqādān al-qādirī ṭariqān, as well as the copy date, *Ġumāda al-tānī* 1355/1936. This second codex was copied onto type A *Abū Šubbāk* paper (most probably A.2., due to the dimensions of the shield and its current colour). Maximum sheet dimensions are 24 x 18 cm. The proximity of the two *Abū Šubbāk* have allowed us to compare them. They have not evolved in the same way: type D tends to be closer to white, whereas type A has gone brown.

Ms. 4627 has no colophon. The library card indicates it should be 128 years-old: assumin that estimate is accurate, we would still need to know starting from when. For conservation reasons, we were not able to count the different quires. Maximum sheet dimensions are 24.5 x 18 cm. It should be noted that bifolios have often fallen out along the centrefold.

The countermark mentions the Galvani house, via one of its sons, Andrea, who lived during the first half of the 19th c. (1797-1855)⁷⁰. According to Heawood, this paper was produced starting from 1836⁷¹. In any case, it remained in use until the beginning of the 20th c., well after his death: e.g. among the manuscripts of Zabīd, between 1291/1874-1875 (m/h 14, copied out in the ribāṭ of Yaḥyā b. ʿUmar al-Ahdal in Zabīd) and 1337/1918-1919⁷². It is one of the features of paper D which allows us to guess its dating: it is produced on a cylinder (ill. 10.c.). However, the mechanisation of Galvani's paper-making process took place around 1883-1895⁷³.



Ill. 10.c

Numerous manuscripts from the IES come from Harar. Beyond the history of the collection, a palaeographic study could certainly tell if these two books were copied in Ethiopia.

It is not the first instance of a countermark in different languages. Waltz mentions two in Nigeria, one in Arabic and Western letters, the other with Arabic letters but in Hawsa language⁷⁴. According to Walz,

this last example corroborates the production of a paper to satisfy a given market.

For type D paper, one can suppose it being in use starting from 1883-1895.

Posterity & Longevity of *Abū Šubbak* Paper

Type E. *Abū Šubbak* papers from the souk

This is a non-watermarked paper, of a yellowy colour (ill. 11). Original sheet dimensions are 50 x 35 cm. Chains are perpendicular to the sheet, taken in its length. The distance between the inner edges of two chains is 2.3 cm. The spacing covered by 20 laid lines, measured from the outer edges, represents between 3.2 and 3.3 cm.



Ill. 11

A laboratory analysis of the type of paper pulp and its components was carried out on a sheet bought in the souk in Zabīd, at the beginning of the year 2000's. The paper was produced from a bleached chemical pulp from resiniferous trees (Scotch pine) but mostly from deciduous trees (birch, poplar, hornbeam...). No presence of annual plant fibres was detected. Minor damage to the fibrous walls, as well as a few fine elements, likens it to industrial pulp in the 20th c.⁷⁵.

From the Circulation of Paper to a Few Thoughts on Trade: *An Abū Šubbak / Abū Šibbāk / Abū Šubbāk* 'Zone'?

No "*Abū Šubbak*" was recorded in Egypt by Walz, who based his study on a survey of both archive documents and codices. However, some doubt remains as his study runs until 1880, a date he highlights as a turning point in the balance of power for the Egypt-Sudan

region⁷⁶. He notes one "*abu shibbāk*" for Eastern Sudan, at the end of the 20th c., which is beyond the use range we have worked out. Out of the 50 manuscripts of the Archinard collection (French National Library), coming from West Africa, 24 were written on watermarked papers, over a timespan going from the 18th c. to the first half of the 20th c. None of these correspond to the paper studied here⁷⁷. Lastly, in Nigeria, the watermarked papers containing Arabic are those described by Walz⁷⁸. Needless to say, research in Northern Africa needs to be carried out.

So, to this day, *Abū Šubbak* paper has been confirmed in manuscript codices and printed books in Yemen, manuscript codices in Ethiopia, as well as the far East, in manuscripts in Arabic. Yet, the spread of knowledge, scholars and manuscripts between these various countries for the period which concerns us, are documented facts, even if the spread of knowledge between Yemen and Ethiopia is a little-known subject for the moment: Ethiopian scholars went to Yemen to study, especially in Zabīd⁷⁹; Yemeni sheikhs settled in Ethiopia; Sayyid families, therefore scholars, from Hadramawt, emigrated to Indonesia and Malaysia, at least as of the 17th c.⁸⁰. Between Yemen and Ethiopia, manuscripts did circulate but, quite possibly, so did paper too. Regarding Indonesia, the presence of manuscripts from Hadramawt cannot be discarded⁸¹. Piecing together the history of libraries and manuscripts, as well as a stronger statistical basis reflecting the presence of such a paper in Ethiopian codices should tell us more. The same issues arise with the papers used in the manuscripts kept at the Riyadhha mosque, in Lamu (Kenya), as these manuscripts are evidence of links to Yemen⁸². For the moment, among these areas, the most likely centre for the import of this paper is Yemen.

As for type D, only two occurrences of it have been spotted, and both only in Ethiopia.

Production and Trade:

Towards An Ottoman Paper Vs. Italian Paper Competition

We have drawn up 2 groups of "*Abū Šubbak*" papers, the *Abū Šubbak* per se and the *Abū Šibbak/Abū Šubbak* which would point to two distinct production locations, according to our hypothesis.

The first group, comprising types A and B, have a countermark in osmanlı, mentioning Istanbul. Type A.2. was used to make codices from 1846-1847 to 1936-1937, i.e. a use range of almost one century, then was followed by type A.1., for a period going from 1926-1927 - 1912? - to 1956, in Yemen, with possibly a peak in 1345/1926-1927 for Ethiopia. Type B was reported in 1312/1894-95 (maybe until 1942?), this one was a type of continuous paper made industrially for printing.

The second group, comprising types C and D, have a countermark in Arabic and do not mention Istanbul anymore. As the countermark on type D refers to the house of Galvani, it may have been used as of 1883-1895. The information given by Walz quoting Shuqayr, who mentions a paper called "*abū šibbāk*" among European imports to the Sudan at the end of the 19th c., does add up, even if the vocalisation of the *šin* in type D is not with an *i*, but most likely with a *u*, as in "*Abū Šubbāk*", "*abū šibbāk*" corresponding more to type C. Finally, for Yemen, the use range for type C, present at a later date, stretches from 1937-1938 to 1942-1943. We may thus assert that type D was made in Friuli, but the maker of type C has yet to be identified.

CONCLUSION

The primary interest of this work is to show that there are several papers of the Abū Šubbāk type. The identification and classification of the examples known to date, provide a means of more accurately dating and locating the production of manuscripts in which they were used.

But their documentary value for understanding the paper trade along the shores of the Red Sea during the 19th and early 20th centuries is also considered. It is with the aim of systematically treating the paper of manuscripts itself as a source, to clarify the methodology to follow and to demonstrate its epistemological interest.

From a historical perspective, this material provides a glimpse of the continuing competition in the Yemeni and Ethiopian markets from the mid-nineteenth century to the beginning of the 20th century between a Turkish manufacturer (probably private), and the famous

Galvani, who dominated the market in Egypt and Sudan during the 19th century.

Although the question of imitation or borrowing of watermarks by Italians and Turkish producers has been raised, particularly by Turkish historians, the 'traditional' sources referred to have so far provided no proof. According to our analysis, type D paper provides an example of Italians borrowing from Turks (the countermark in Arabic), after the probable borrowing of the Italian watermark (the shield and crescent) by the Turkish.

Abu Šubbak papers appear, though not exclusively, to be an excellent marker of the emigration or movement of the Yemeni population, who were often both scholars and merchants. The fact that the name "Abu Šubbak" became a generic term indicates the affection towards this paper by those who use it. The routes of goods and those of men (scholars) overlap in this case, but a map of the circulation of papers reflecting people's customs and human preferences or tastes also calls for the attention of researchers, because it is not certain that these routes always overlap.

It is hoped that the statistical information on which these findings rest may be expanded in the near future and that, in general, this type of study will proliferate.

NOTES

¹ This study would never have been possible without the support of the French Centre for Archaeology and Social Sciences (CEFAS, Šan'a', Program for safeguarding the manuscripts from the libraries in Zabīd since 2001); of the Hā'il Sa'īd Foundation and the goodwill of its director, Fayṣal Sa'īd Fāriḥ (Ta'izz, October 2010 mission); of the French Centre for Ethiopian Studies (CFEE) and the Institute for Ethiopian Studies (IES, Addis Ababa, December 2010 mission); of the Harar Centre at the Sherif Harar City Museum and Abdullah Sherif (December 2010); of Research Unit 7192 (UMR) at the CNRS (French National Centre for Scientific research, n.d.t., laboratory analysis of the papers, November 2011). A preliminary version of the

article was presented at the MESA meeting of 2011 in Washington D.C., thanks again to the support of UMR 7192.

² Terence Walz, "The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries", in M. W. Daly, *Modernization in the Sudan. Essays in Honor of Richard Hill*, New York, Lilian Barber Press, 1985, 29-48; *ibid.*, "The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries and its Re-export to the *Bilād as-Sūdān*", in Graziano Krätli & Ghislaine Lydon (ed.), *The Trans-Saharan Book Trade. Manuscript Culture, Arabic Literacy and Intellectual History in Muslim Africa*, Leiden/Boston, E. J. Brill, "Library of the Written Word" 8, "The Manuscript World" 3, 2011, 73-107, which is an updated version of the preceding article; a few examples of these watermarks are reproduced in Adrian Brockett, "Aspects of the Physical Transmission of the Qur'an in 19th-century Sudan: Script, decoration, binding and paper", *Manuscripts of the Middle East* 2 (1987), 45-67.

³ This is based on our own observations, in the case of Yemen in Zabīd and at the Hā'il Sa'īd Foundation in Ta'izz and, for Ethiopia, in Addis Ababa and in Harar City.

⁴ For Nigeria, cf. T. Walz, "The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries", *op. cit.*, 1985, 41-42; *ibid.*, 2011, 99-100; watermarked papers prior the 20th c. which Michaëlle Biddle (Wesleyan University Library) managed to see are either Italian (Lombardie-Venetie and Fabriano) or French (personal communication). For West Africa, the Archinard Collection (Fonds Archinard): N. Tapiro, "A propos d'un manuscrit arabe d'origine soudanaise déposé à la Bibliothèque nationale de Paris", *Research Bulletin of the Center of Arabic Documentation*, University of Ibadan, vol. 4, Dec. 1968, 26-40, and more thorough, Natalia Viola, "Inventaire des papiers filigranés des manuscrits arabes provenant de l'Afrique de l'Ouest", soon to be published in the proceedings of the Conference in Madrid "Codicologia y Historia del Libro manuscrito en caracteres arabes," organised by François Déroche, Nuria Martínez de Castilla and Francis Richard.

⁵ In the case of wallpaper, see the various articles in the themed issue "Technique et Papier Peint" of the *Bulletin de la Société Indus-*

truelle de Mulhouse 4/1991. For the industrial making of paper in Europe and in the United States, see Dard Hunter, *Papermaking. The History and Technique of an Ancient Craft*, New York, Dover 1978 [repub. of the second, revised and enlarged 1947 ed.]; for France in particular, Louis André, "L'invention de la machine à papier et les débuts du papier continu en France", *Bulletin de la Société Industrielle de Mulhouse*, *op. cit.*, 87-99.

⁶ Cf. Thomas Kuhn's conclusions in *Shaping Ottoman Rule in Yemen, 1872-1919*, New York, New York University, 2005.

⁷ Examples of non-watermarked paper, made in India throughout the period, can be found in Neeta Premchand, *Off the Deckle Edge. A paper-making journey through India*, Bombay, the Ankur Project, 1995. An article describing an example of watermarked paper, the countermark of which refers to Bombay, is currently being prepared by the author. See also Dard Hunter, *Paper-making by hand in India*, New York, 1939.

⁸ T. Walz, "The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries", *op. cit.*, 38; *ibid.*, 2011, 91.

⁹ Genevieve Humbert, "Le manuscrit arabe et ses papiers", in G. Humbert, *La tradition manuscrite en écriture arabe*, *Revue des mondes musulmans et de la Méditerranée*, 99-100, 2002, 55-77, 67.

¹⁰ Şinasi Tekin, *Eski türklerde, Yazı, Kağıt, Kitap ve Kağıt Damgaları* [Script, paper, books and watermarks time of the old Turks], Istanbul, Eren Yayıncılık ve Kitapçılık, 1993, 90-91, mentioned by G. Humbert, *ibid.* More examples can be found in Veslovod Nikolaev, *Les filigranes de l'Empire ottoman* [original title in Cyrillic], vol. 1, Sofia, 1954, n° 938, years 1807/1808; 944, 1808; 945, 1808; 946, 1808; 947, 1808; 977, 1812.

¹¹ Anne Regourd with the collaboration of Hélène C. David and of 'Abd al-Rahman al-Ahmar, *Catalogue cumulé des bibliothèques de manuscrits de Zabid*. I. Bibliothèque 'Abd al-Rahman al-Hadhrami, fasc. 1, *Les papiers filigranés, Şan'ā'*, Centre Français d'Archéologie et de Sciences Sociales, Fonds Social de Développement, 2008, mss m/h 1, pl. 001-003, and m/h 17, pl. 126. See Maria Luisa Russo, "Il fondo yemenita della BANLC tra codicologia, conservazione e restauro", in Valentina Sagaria Rossi (dir.), *Libri Islamici in controluce. Ricerche*,

modelli, esperienze conservative, Rome, Università degli Studi di Roma "Tor Vergata", 119-146, 127.

¹³ Osman Ersoy, *XVIII. ve XIX. Yüzyıllarda Türkiye'de kâğıt* [Paper in Turkey in the 18th & 19th Centuries]. Ankara Üniversitesi Basımevi, Ankara, 1963; Mehmet Ali Kâğıtçı, *Historique de l'industrie papetière en Turquie*, preface by Prof. Marcel Aribert, Grafik Sanatlar Matbaası, Heybeliada, İstanbul, 1976; Mübahat S. Kütükoglu, *Osmanlı Belgelerinin Dili (Diplomatik)* [The Language of Ottoman Documents, diplomatic], İstanbul, Kubbealtı Akademisi Kültür ve San'at Vakfı, 1994, 15-36. My heartfelt thanks to Nicolas Vatin (EPHE), Frederic Hitzel (CNRS-EHESS) and Orhan Elmaz (Institute of Oriental Studies, University of Vienna) who helped me find my bearings with texts in Turkish and to F. Hitzel for his thorough proofreading of the overview of Turkish papermaking for the given period.

¹³ As they also used to make wrapping paper, cigarette paper (e.g. at the Hamidiye Fabrikası), as well as paper for bank bills, lottery tickets...

¹⁴ Cf. G. Humbert, note 8.

¹⁵ According to O. Ersoy, *op. cit.*, 48-51, the paper mill in İzmir was established in 1843 and remained active for ten years or so.

¹⁶ See some images of the remains of the building here: http://www.istanbulkulturenvanteri.gov.tr/kentsel-sivil-mimaril/detay/envanter_id/51617; <http://www.envanter.gov.tr/anit/smo/detay/5409>; and also of the machines, <http://www.osmanli700.gen.tr/album/fotoo3.html> (websites checked in October 2012).

¹⁷ See M. A. Kâğıtçı, *Historique de l'industrie papetière en Turquie*, *op. cit.*, 1976, respectively, 10-11, 11, 31, 34, 35, and O. Ersoy, *XVIII. ve XIX. Yüzyıllarda Türkiye'de kâğıt*, *op. cit.*, 30-36, 36-48, 48-51, 51-53.

¹⁸ Zeki Arıkan, "İzmit Kâğıt Fabrikası ile İlgili Belgeler" [Documents on the Paper Mill in İzmit], *TTK Belgeler*, XVIII/22 (1997), 111-158.

¹⁹ See for example, O. Ersoy, *XVIII. ve XIX. Yüzyıllarda Türkiye'de kâğıt*, *op. cit.*, 34.

²⁰ This is the kind of work Mehmet Ali Kâğıtçı has started carrying

out, in his previously mentioned publication, *Historique de l'industrie papetière en Turquie*, 1976.

²¹ Cf. Anne Regourd, "Les routes commerciales entre Zabīd et l'Europe: les papiers filigranés de fonds manuscrits de Zabīd (Yémen, fin 18e-milieu 20e s.)", in R. Traini, *Convegno Storia e cultura dello Yemen in età islamica con particolare riferimento al periodo rasūlide* (Roma, 30-31 ottobre 2003), Rome, Bardi ed., 2006, 173-198, including the bibliography.

²² This has been observed for Persian manuscripts where the storing period for a paper can be between 3 to 10 years (Francis Richard, personal communication).

²³ *Op. cit.* footnote 21.

²⁴ V. Nikolaev, *Les filigranes de l'Empire ottoman*, *op. cit.*; Asparoukh Velkov & Stephane Andreev, *Filigranes dans les documents ottomans*, I. *Trois croissants*, Sofia, "Bibliothèque Cyrille et Méthode", 1983; Asparoukh Velkov, *Les filigranes dans les documents ottomans. Divers types d'images*, Sofia, éd. "Textes – A. Trayanov", 2005; Stefan Andreev, *Les filigranes dans les documents ottomans. Couronne*, Sofia, éd. "Textes – A. Trayanov", 2007.

²⁵ A. Velkov & S. Andreev, *Filigranes dans les documents ottomans*, I. *Trois croissants*, *op. cit.*, 14.

²⁶ A. Velkov personal communication. In the introduction of their respective works, Velkov and Andreev have always mentioned a time period going from the 16th c. to the 18th c.

²⁷ Ghislaine Lydon, *On Trans-Saharan Trails. Islamic Law, Trade Networks, and Cross-Cultural Exchange in Nineteenth-Century Western Africa*, Cambridge, Cambridge University Press, 2009, 102sq.

²⁸ G. Humbert, "A la recherche de manuscrits dans les bibliothèques privées du Yémen: première mission à Zabīd", *Chroniques yéménites* 96-97, 1997, 32-35, 34; also G. Humbert, "Le manuscrit arabe et ses papiers", *op. cit.*, 67.

²⁹ Letters are punctuated and the vocalisation is that which appears on the paper. The *wāw* vowel is placed between the *wāw* of *Abū* and the *šīn* of *Šubbak*, but it would be more in keeping with Arabic writing to consider it part of the first word. The vocalisation of *Šubbak*

can be explained by referring to usage: that is how that paper is referred to nowadays in Yemen, as will be explained hereafter.

³⁰ Noha Sadek, "Zabīd", *Encyclopaedia of Islam*, 2d ed.; Anne Regourd, "Les manuscrits des bibliothèques privées de Zabīd: enjeu d'un catalogage", *Proceedings of the Seminar for Arabian Studies* 32 (2002), 247-257; for places of learning, see 'Abd al-Rahman al-Hadhrami, *Zabīd, Masājiduhā wa-madārisuhā al-'ilmiyya fī al-tārīḥ*, Damascus, CEFAS, IFEAD, 2000, and Anne Regourd, "Zabid: des lettrés et des manuscrits", in Guillaume Charloux, Jérémie Schiettecatte (éd.), *Quarante ans d'archéologie française au Yémen*, Sanaa, CEFAS, soon to be published.

³¹ Cf. A. Regourd, "Les routes commerciales entre Zabīd et l'Europe: les papiers filigranés de fonds manuscrits de Zabīd (Yémen, fin 18e-milieu 20e s.)", *op. cit.*, 2006, 173-198.

³² The size of the sheet is missing. Spacing between two chain lines is approximately 2.6 cm and that between 20 laid lines, between 2.7 and 2.8 cm.

³³ Manuscripts m/ḥ 1 and 17 from 'Abd al-Rahman al-Hadhrami's library were catalogued, in A. Regourd (dir.), CCBMZ, I, fasc. 1, 2006. The watermarked papers were reproduced in: A. Regourd with the collaboration of H. C. David and of 'Abd al-R. al-Ahmar, CCBMZ, I, fasc. 1, *Les papiers filigranés*, 2008, manuscripts m/ḥ 1, pl. 001-003, and m/ḥ 17, pl. 126.

³⁴ A. Regourd (dir.), CCBMZ, I, fasc. 2, 2008; the watermark catalogue in fasc. 2 is yet to be published. Free-hand sketches of watermarked papers, on which the numbers are based, were carried out in Zabid by 'Abd al-Rahman al-Ahmar, a member of the Program for Safeguarding Zabid's Manuscript Libraries.

³⁵ A. Regourd (dir.), CCBMZ, I, 3, soon to be published, along with its watermark catalogue. Again, free-hand sketches of watermarked papers, on which the numbers are based, were carried out by 'Abd al-Rahman al-Ahmar.

³⁶ Mounir Arbach and Muhammad Jazim, "Mafākhīr Qahtān wa-l-Yaman: une partie du volume III de l'Iktīl d'al-Hamdānī?", *Chroniques du manuscrit au Yémen* 4 (juin 2007), <http://www.cefas.com.ye/spip.php?article162>.

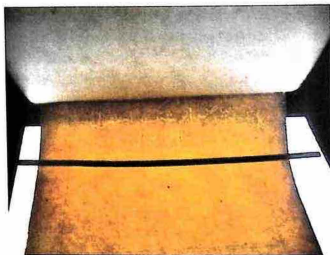
³⁷ Manuscripts mostly from the neighbouring. The figure, 334 manuscripts as of October 2010, was communicated to us by the foundation's chief librarian, based on an electronic inventory, kept up-to-date. To have an idea of the potential increase in the collection over a year, the library's inventory, put online in February 2009, in the *Chroniques du manuscrit au Yémen* 7, counted 304 manuscripts (<http://www.cefas.com.ye/spip.php?article172>).

³⁸ The colophon in m/h 17 states "Masjid al-Aḥmar fī madīnat Zabīd" as the place of the copy, cf. A. Regourd (dir.), *CCBMZ*, I. 1. To know more about the location of this mosque, see A. Regourd, "Zabīd: des lettrés et des manuscrits", *op. cit.*, and the map of Zabīd, soon to be published.

³⁹ Na'um Shuqayr, *Gughrafiyya wa-tarih al-Sudan*, Beirut, 1967, 177, based on T. Walz, "The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries", *op. cit.*, 1985, 39-40; *ibid.*, 2011, 96. Cited by Jonathan M. Bloom, "Paper in Sudanic Africa", in Shamil Jeppie, Souleymane Bachir Diagne (eds), *The Meanings of Timbuktu*, Hsnc Press, Cape Town, Codesria, Dakar, 2008, chapter 4, 45-57 + 1 pl., "At the end of the nineteenth century, a thick brown (perhaps cream colored) paper called *abu shibbāk*, presumably referring to its weave or even texture, was also imported from Europe", 54.

⁴⁰ Russel Jones, www.ottomansoutheastasia.org/ottoman-watermarks-in-malay-manuscripts.php.

⁴¹ Numerous works deal with the emigration of Hadrami scholars to Indonesia, in general, we will just cite here: Robert Bertram Serjeant, *The Sayyids of Hadhramaut*, Londres, School of Oriental and African Studies, 1967; id., "History and Historiography of Hadhramaut", *Bulletin of School of Oriental and African Studies* XXV, 1962, 239-471, numerous references, of which 255; various articles in Ursula Freitag and William G. Clarence-Smith, *Hadhrami Traders, Scholars and Statesmen in the Indian Ocean, 1750s-1960s*, Leiden, New York, Cologne, E. J. Brill, 1997. Regarding North Sumatra, U. Freitag mentions the case, considered exemplary, of four Hadrami Sayyid-s from Tarīm, who emigrated to the province of Aceh, where the Regency of Aceh Besar used to be in the late-18th c., "Reflections

Ill. *rbis*.

on the Longevity of the Hadhrami diaspora in the Indian Ocean", in Ahmed Ibrahim Abushouk & Hassan Ahmed Ibrahim, *Hadhrami Diaspora in Southeast Asia. Identity Maintenance or Assimilation?*, Leiden/Boston, E. J. Brill, 2009, 17-32, especially pp. 23sq. and note 18. Abdul Rahman Tang Abdullah, "Arab Hadhramis in Malaysia: their origins and assimilation in Malay society", in Ahmed Ibrahim Abushouk & Hassan Ahmed Ibrahim, *Hadhrami Diaspora*, *op. cit.*, 45-56, pp. 47sq., insists, based on the case of Malaysia in the late 17th c., on the dual activities of the Sayyid-s from Hadramawt, carrying out business by relying on their trade networks, on the one hand, and claiming their religious role, on the other hand: we thus have a potential circulation network for books, lasting till the 18thc. and 19thc.

⁴² Addis Ababa, collections of the Institute of Ethiopian Studies, 4 occurrences out of 65 manuscripts examined, i.e. MS 265, 4558 (1), 4574 (18), 5505; Harar City, Sherif Harar city Museum, 'Abdullah Sharif's private library, 5 occurrences out of 16 manuscripts the paper of which was examined, the collection representing as much as ca. 1,000 manuscripts, according to its owner (see ill. *rbis*). Harar is a centre for copying Arab manuscripts, cf. R. S. O'Fahey, *Arabic Literature of Africa*. Volume 3 – Fascicule A. *The Writings of the Muslim Peoples of Northeastern Africa*, Leiden/Boston, E. J. Brill, "Handbook of Oriental Studies", section 1, The Near and Middle East, vol. 13, 2003, 20, on the collection of Arab manuscripts found in Harar.

⁴³ Mentioned by G. Humbert, "Le manuscrit arabe et ses papiers", *op. cit.*, 67.

⁴⁴ G. Humbert, *ibid.*, 67 and note 31, based on Faruk Bilici.

⁴⁵ We have personally observed numerous examples, which were not always noted; here are a few references, 'Abd al-Rahman al-Hadhrami's library, m/h 7, m/h 50; Şan'ā', Dār al-makhṭūṭāt, ms. 2774, 'ulūm khafiyya 22, M. S. al-Maliḥ and A. M. 'Aysawī, *Fihris makhṭūṭāt al-Maktaba al-gharbiyya bi-al-Jāmi' al-kabīr bi-San'ā'*, Alexandria, s. d., 432, described in Anne Regourd, "Images de djinns et exorcisme dans le *Mandal al-sulaymani*", with text edition, and translation, in A. Caiozzo, J.-P. Boudet, N. Weill-Parot (ed.), *Autour de Picatrix: Images et magie*, Proceedings of the International Congress, Institut national d'histoire de l'art, Paris, 2007, Paris, Champion, 2011, 254.

⁴⁶ A paper bearing a watermark, perhaps in the shape of a Qur'anic tablet containing a text in Arabic script but in Hawsa language (Ajami), saying: "Ankuri mangani dunya", and known to Walz, was the best paper available on the souk, according to Nigerian scholars: it came to be, as for the Abu Šubbak, the general name for good quality paper, see Ismaheel Akinade Jimoh: "The art of Qur'anic penmanship and illumination among Muslim scholars in southwestern Nigeria," in Fahmida Suleman, *Word of God, Art of Man. The Qur'an and its Creative Expressions*, London, Oxford University Press in association with The Institute of Ismaili Studies, 2007, 175-189, 178. The same evolution from the name of a brand to a generic product can be observed for other products: in French, a "Frigidaire" refers to a refrigerator – "Frigidaire" being a brand – or, in English, a "hoover" refers to a vacuum cleaner, be it a Hoover vacuum cleaner or otherwise.

⁴⁷ See A. Velkov & S. Andreev, *Watermarks in Ottoman Documents, I. Three Crescents (Filigranes dans les documents ottomans, I. Trois croissants)*, Sofia, Bibliothèque Nationale "Cyrille et Méthode", Bulgarian Archaeological Commission, Oriental section, 1983, entirely devoted to this motif, as its title indicates.

⁴⁸ Same observation as in note 29.

⁴⁹ Reproduced in the CCBMZ, I. 1, *Les papiers filigranés*, see under no. 003.

⁵⁰ See CCBMZ, I. 1. *Les papiers filigranés*, see under no. 126 and 127. No mention to double chain lines means only that it was not observed.

⁵¹ The date is written in the direction of Arab script, from right to left, contrary to usage, i.e. 1, then 3, then 4 and finally 5.

⁵² See note in the online Catalogue of the manuscripts of the BnF, http://archivesetmanuscrits.bnf.fr/ead.html?id=FRBNFEAD000038661&qid=sdx_q3.

⁵³ Cf. Anne Regourd, "Tasliya", *Muhammad in History, Thought, and Culture: An Encyclopedia of the Prophet of God*, Santa Barbara, ABC-CLIO, forthcoming.

⁵⁴ See again the online catalogue of the French national Library (BnF), <http://archivesetmanuscrits.bnf.fr/ead.html?id=FRBNFEAD000089778>. For a general presentation of the Yemeni manuscripts part of the Collection Colin, see Marie-Geneviève Guesdon, "La Collection Colin à la Bibliothèque nationale de France", *Chroniques du manuscrit au Yémen* 15 (janv. 2013), forthcoming.

⁵⁵ The oblique lines were added here to indicate a new line.

⁵⁶ No mention of double chain lines means only that it was not observed.

⁵⁷ T. Walz, "The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries", *op. cit.*, 38; *ibid.*, 2011, 93.

⁵⁸ I would like to thank Jean-Louis Estève (Paris, Ecole Estienne) for his comments on this paper.

⁵⁹ *Fihrist kutub al- izāna al-mutawakkiliyya al-‘āmira bi-al-jāmi‘ al-muqaddas bi-San‘a’ al-muhammiyya*, Šan‘a’, Wizārat al-ma‘ārif al-mutawakkiliyya, 1312/1894-95.

فهرست کتب الخزانة المتوكلية العائمة بالجامع المقدس بصنعاء
المحمية، صنعاء، وزارة المعارف المتوكلية، 1361/1942

⁶⁰ The whole study was carried out on my personal copy.

⁶¹ Dard Hunter, *Papermaking. The History and Technique of an Ancient Craft*, New York, Dover 1978 [repub. of the second, revised and enlarged 1947 ed.], 400. See also Firmin Didot, *Le Centenaire de la machine à papier*, Paris, 1900, which gives the credit to a factory worker, Louis Nicolas Robert (1761-1828), an employee at a paper

mill in Essonne, near Paris, the invention of continuous paper into “mechanical paper”, p. 30.

⁶² The laboratory analysis was carried out by the INP-Pagora in Grenoble in November 2011, thanks to the financial support of UMR 7192 (CNRS).

⁶³ M. A. Kâğıtçı, *Historique de l'industrie papetière en Turquie*, *op. cit.*, 34-35.

⁶⁴ Again, letters are punctuated and the vocalisation present was reproduced.

⁶⁵ CCBMZ, I. 2, *op. cit.*

⁶⁶ CCBMZ, I. 2, *op. cit.*

⁶⁷ See note 36.

⁶⁸ Again, letters are punctuated and the vocalisation present was reproduced.

⁶⁹ The information given on the card bearing that number doesn't correspond.

⁷⁰ Cf. Gilberto Ganzer, *Andrea Galvani, 1797-1855: cultura e industria nell'Ottocento a Pordenone*, Pordenone, Studio Tesi, 1994, particularly the family tree.

⁷¹ E. Heawood, *Watermarks, mainly of the 17th and 18th centuries*, Hilversum, Paper Publication Society, “Monumenta Chartae Papyraceae Historiarum Illustrantia”, 1, 1950, 860.

⁷² Cf. also for Yemen: Marie-Geneviève Guesdon, “Manuscripts de provenance yéménite donnés à la Bibliothèque nationale par Pierre Bardey en 1930”, *Chroniques yéménites* 13 (2005), 59-72, 67 and 68; Egypt: T. Walz, “The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries”, *op. cit.*, 29sq.; *ibid.*, 2011, 75sq.; Sudan: T. Walz, *ibid.*, 39-41; *ibid.*, 2011, 95-98; A. Brockett, “Aspects of the physical transmission of the Qur'an”, *op. cit.*, 45-67.

⁷³ Cf. G. Ganzer, *Andrea Galvani*, *op. cit.*

⁷⁴ Cf. T. Walz, *ibid.*, 42, quoted by J. Bloom, *op. cit.*, 54; Walz, 2011, 103-104.

⁷⁵ Laboratory analyses at the INP-Pagora, Grenoble, November 2011, carried out with the support of UMR 7192, CNRS.

⁷⁶ T. Walz, *ibid.*, 29 and 43, notes 4 and 6, where he indicates he consulted, in Cairo, 276 archive volumes at the Maṣlaḥat al-Ṣarḥ al-

‘Aqārī, as well as 60 manuscripts from the National Library, Dār al-kutub; *ibid.*, 2011, 73-74 and notes 8, p. 76, and 12, p. 77-78.

⁷⁷ Cf. N. Viola, *op. cit.*

⁷⁸ T. Walz, “The Paper Trade of Egypt and the Sudan in the Eighteenth and Nineteenth Centuries”, *op. cit.*, 41-42; *ibid.*, 2011, 103-104.

⁷⁹ See the exemplary bibliography of Shaykh al-Asad, who was originally from al-Ūsī in Ethiopia, and settled in Zabīd, in “Šayḥ ‘Ulamā’ Zabīd – al-šayḥ al-‘allāma Asad Ḥamza b. ‘Abd al-Qādir al-Ūsī”, *Mağallat al-Ğaḍwa* 7, 1425/2004, 99-103.

⁸⁰ See note 41. This collective publication contains other articles, of a more monographic nature, which comprise family trees leading back to Hadrami Sayyid families.

⁸¹ Cf. note 40.

⁸² Anne K. Bang (Bergen University) is in charge of cataloguing the collection. To this day, only papers originating from Europe have been documented.

The Corpus of the Arabic Science of Weights (9th-19th Centuries): Codicology, Textual Tradition and Theoretical Scope

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INTRODUCTION

THE FOLLOWING ARTICLE will be devoted to two main concerns:

1. The description of the textual tradition of the Arabic corpus of the science of weights (*'ilm al-athqāl*), a tradition of scientific and technical treatises reconstituted from manuscripts, most of which were never published. The components of this corpus, amounting to more than thirty texts, cover the whole range of scientific activity in Islamic lands from the 9th through to the 19th century. This group of texts is unified by a common theme: the spectrum of theoretical and practical problems related to the description, the functioning and the use of various types of balances, and especially of the steelyard, the balance with calibrated beam, unequal arms and moving weights.

2. The interpretation of the Arabic corpus of the science of weights as a transformation in the history of mechanics. Such a transformation was represented by the creation of an independent theoretical branch that evolved from ancient contributions and nourished physical debates until the advent of modern science on the problems of equilibrium and the properties of weighing operations. As a result, *'ilm al-athqāl* should

no more be confused with *'ilm al-hiyal*, understood as a general descriptive discourse on different types of machines.

Such an understanding of the historical significance of the Arabic science of weights brings about an important result, in the sense that this tradition was connected with the next important phase of the history of mechanics. Indeed, beyond cultural and linguistic boundaries, the Arabic science of weights afforded a foundation for the Latin *scientia de ponderibus* that emerged in medieval Europe from the 13th century.

I. THE BALANCE, INSTRUMENT OF THE SCIENCE OF WEIGHTS

The balance is an instrument of our current life, charged with history and science. In Islamic classical times, this familiar instrument was the object of an extensive scientific and technical debate of which dozens of treatises on different aspects of its theory, construction, and use are the precious remains. Different sorts of balances were the object of such an extensive enquiry, including the normal equal-armed balance (called in Arabic *mīzān*, *ṭayyār*, and *shāhīn*), the steelyard (called *qarastūn*, *qaffān*, and *qabbān*) and sophisticated balances for weighing absolute and specific weights of substances.

Several drawings of balances are preserved in Arabic manuscripts, such as those of al-Khāzinī, al-Ḥarīrī, and al-Qazwīnī. Further, some specimens of the ancient balances survived and are presently kept in museums. For instance, the National Museum in Kuwait (item LNS 65 M) held an Islamic steelyard built in Iran between the 10th and the 12th centuries (fig. 1: *Islamic steelyard from Iran kept in the National Museum, Kuwait City*).¹ It is an instrument made of inlaid engraved steel, with marks on its beam. Its dimensions (height: 11.5 cm, length: 15.6 cm) show that it was used for weighing small quantities.² Two significant steelyards are owned by the Petrie Museum (University College, London). One of them (accession number Inv. 1935-457) is a huge balance (fig. 2: *Islamic steelyard in Petrie Museum, London*). A scale of silver is inlaid along its 2.37m long, wrought-iron beam. It bears two suspending elements and corresponding calibrations: one ranging from 0 to 900 *raṭl*-s (1 *raṭl* is approximately 1 pound); the other ranging from 900 to 1820 *raṭl*-s (almost a pound or about 450 grams).³



Figure 1 Islamic steelyard from Iran kept in the National Museum, Kuwait City.



Fig. 2: Islamic steelyard in Petrie Museum, London.

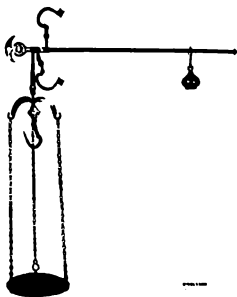


Fig. 3: Ottoman steelyard, 18th-19th century, length: 410 mm; N° KMA 677 (cat. 285), from Garo Kürkman, *Anatolian Weights and Measures*, Istanbul: Suna & İnan Kiraç Research Institute on Mediterranean Civilizations, 2003, p. 133.

The interest in the balance in Islamic scientific learning was culturally nurtured by its role as a symbol of good morals and justice. The Qur'an and the Ḥadīth appealed extensively to a strict observance of fair and accurate weighing practices with the balance. Considered

the tongue of justice and a direct gift of God, the balance was made a pillar of the right society and a tool of good governance. These principles were recorded explicitly in several treatises on the balance, such as the introduction to *Kitāb mīzān al-ḥikma* by al-Khāzinī, where the balance

is qualified as "the tongue of justice and the article of mediation." Furthermore, it was counted as a fundamental factor of justice, on the same level with "the glorious Book of God," and "the guided leaders and established savants."⁴

The balance most widely used in the Islamic lands of medieval times was the equal-armed platform scale, made mostly in copper. There were tiny balances for gold and jewels, average ones for retail traders, and huge balances for the merchants of grains, wood, wool, etc. In general, the balances had beams and weights made of steel or iron. Steelyards, called *qarastūn* or *qabbān*, were also widely employed. As reported in a historical source,⁵ a site called *Qarastūn* existed in the ancient medina in Fez until the early 20th century, probably because of a huge public balance set up there. Public balances are still located today in the *fanādiq* (bazaars) of the old medina. One can infer from these testimonies that a similar public weighing site must have been present in all the markets of Islamic cities.

The *qarastūn* or steelyard with a sliding weight was largely used since Antiquity. It is mentioned in Greek sources by its ancient name, the *chariston*, and was employed extensively in Roman times.⁶ Composed of a lever or a beam (*'amūd*) suspended by a handle that divides it into two unequal arms, the centre of gravity of the instrument is located under the fulcrum. In general the shorter arm bears a basin or a scale-pan in which the object to be weighed is set, or suspended from a hook. The cursor-weight, *rummāna* in Arabic, moves along the longer arm in order to achieve equilibrium. This arm, which has generally a quadrangular cross section, bears two different scales which are engraved along the two opposite sides. Due to the fact that the steelyard can be suspended by two hooks, there are two independent graduations. According to the choice made, there will be different relations between the lengths of the longer and smaller arms of the lever, corresponding to the different scales. On the beam or near the fulcrum, the number of units or fractions corresponding to the capacity of the balance was engraved as was the official stamp of the authorities. The advantage of the steelyard is that it provides an acceptable precision in weighing and allows heavy loads to be supported by small counterweights. In addition, it can be carried around easily.



Fig. 4: Maghribi balance

scale graduated in two series of divisions. Presented as an hydrostatical balance for the determination of specific gravities, it could also serve for ordinary weighing. A variety of the Archimedes' balance consists in moving the scale pan on a part of the arm. This is the main property of the *mīzān ṭabī'ī* (natural or physical balance) designed by Muḥammad ibn Zakariyyā al-Rāzī. In this model with equal arms and without counterpoise, one of the scale pans is movable and might behave as a counterweight.⁹

Nowadays, the steelyard balance is called in some Arab countries *al-mīzān al-qabbānī*; in Morocco it is designated as *mīzān al-kura*. Despite the introduction of modern balances more or less sophisticated, since a long time ago (in the first half of the 19th century), the steelyards continue to be utilised in Arab and Islamic countries. They serve in popular markets and are widely used in some activities, such as in the slaughterhouses and in the shops of butchers. In Egypt, the industry of traditional steelyards is still active. Egyptian colleagues informed me that in the old

Another kind of balance is a combination of the ordinary balance and of the steelyard in the form of an equal-armed balance with mobile weight. A variety of it is the Maghribi balance presented in fig. 4.⁷ Further, a typical example of such an instrument is the balance of Archimedes described by al-Khāzini according to an account by Menelaus (fig. 6).⁸ In addition to its two equal arms to which two fixed scale pans are suspended, this balance had on one of the arms a cursor weight which could be hung up on

city of Cairo, in an area called *Ḥay taḥt al-rub'*, near the *Dār al-kutub*, not far from the Azhar Mosque, artisans build steelyards according to traditional methods. These balances are used massively throughout the country, for example in the weighing of cotton in the country side. In other Arab countries, the fabrication of these balances disappeared completely. For instance, in Morocco, it vanished several decades ago, as a result of the introduction of modern balances and of the concurrence of the European industry of these same instruments. Therefore, the steelyards used in the country are imported from Southern Italy and Spain. But local artisans are able to repair the imported balances and to supply certain of their equipment, as I could see by direct observation during my visits to their shops in Fez recently.

In his geographical book *Aḥsan al-taqāsīm fī ma'rifat al-aqālīm*, Muḥammad al-Muqaddasī, the Palestinian geographer of the 10th century, reports that the most accurate balances were those fabricated at Ḥarrān in northern Mesopotamia. Kūfa, in southern Iraq, was also famous for the accuracy of its balances. Other regions were celebrated for the honesty of the weighing practices of their merchants, such as Khurāsān. But others were better known for their fraudulent procedures. Various passages in the Qur'an show that as early as the advent of Islam, false balances were in use in the markets. Later narratives report that some jewelers and goldsmiths, in order to fraudulently weigh their wares, blew gently on the scale-pan of their balance, stuck a small piece of wax under it, or merely used false weights. Al-Jawbarī (fl. 1216-22) described two such arrangements. In the one the beam of the balance consisted of a hollow reed containing quicksilver, which was closed at both ends. By a slight inclination of the beam, the quicksilver could be made to flow as desired to the side with weights or with goods and thus make one or the other appear heavier. In another case, the tongue of the balance was of iron and the merchant had a ring with a magnetic stone; by bringing the ring close to the balance, it moved down to the right or left.¹⁰

In order to reprimand these fraudulent tricks and deceitful behavior, and to implement the instructions of Islam about the strict observance of the just weighing, the Islamic society invented a specific institutional setting, represented by the office of *ḥisba*. This office was occupied

by the *muhtasib*, an officer regularly appointed to take charge of the harmonisation between the commands of Islam and the social practice, especially concerning the control of markets. As such, one of his main duties was to observe that correct scales and weights were used in commercial transactions.¹¹

2. THE CORPUS OF THE SCIENCE OF WEIGHTS

The emergence of Arabic mechanics is an early achievement in the scientific tradition of Islam. Actually, already in the mid-9th century, and in close connection with the translation of Greek texts into Arabic, treatises on different aspects of the mechanical arts were composed in Arabic, but with a marked focus on balances and weights. These writings, composed by scientists as well as by mechanics and skilful artisans, gave birth to a scientific tradition with theoretical and practical aspects, debating mathematical and physical problems, and involving questions relevant to both the construction of instruments and the social context of their use. Some of these Arabic treatises were translated into Latin in the 12th century and influenced the European science of weights.

The corpus of the Arabic science of weights covers the entire temporal extent of scientific activity in medieval Islam and beyond, until the 19th century. The reasons for such an abundance of literature on the problems of weighing can be explained, only by contextual factors, at least in part. In fact, the development of the science of weights as an autonomous branch of science was triggered by the eminent importance of balances for commercial purposes. In a vast empire with lively commerce between culturally and economically fairly autonomous regions, more and more sophisticated balances were, in the absence of standardisation, key instruments governing the exchange of currencies and goods, such as precious metals and stones. It is therefore no surprise that Muslim scholars produced numerous treatises specifically dealing with balances and weights, explaining their theory, construction and use. This literature culminated in the compilation by 'Abd ar-Rahmān al-Khāzinī, around 1120, of *Kitāb mīzān al-ḥikma*, an encyclopedia of mechanics dedicated to the description of an ideal balance conceived as a universal tool of a science at the service of commerce, the so-called

'balance of wisdom.' This was capable of measuring absolute and specific weights of solids and liquids, calculating exchange rates of currencies, and determining time (fig. 5a-b).

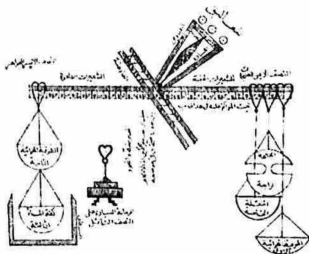


Fig. 5a: Picture of the balance of wisdom (Al-Khāzinī, 1940, p. 103).

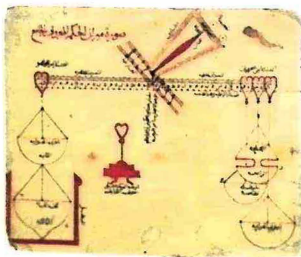


Fig. 5b: Drawing of the balance of wisdom the manuscript of *Kitāb mīzan al-ḥikma* by al-Khāzinī (Rare Book and Manuscript Library University of Pennsylvania, Schoenberg collection, MS LJS 386, p. 230; online at http://dla.library.upenn.edu/dla/medren/page-turn.html?id=ME-DREN_4824919¤tpage=160&double-side=0&rotation=0&size=6).

A complete reconstruction of the Arabic tradition of weights is currently being undertaken by the author. This project began in the context of a long-term co-operation with the Max Planck Institute for the History of Science in Berlin.¹² The work on the establishment of the Arabic

corpus of the science of weights started by the systematic reconstruction of the entire codicological tradition of the corpus of texts dealing – on theoretical and practical levels – with balances and weights. By now most of the corpus has been edited and translated into English and is being prepared for publication with the appropriate commentaries.

The preliminary analysis of the texts investigated so far established the importance of the Arabic tradition for the development of the body of mechanical knowledge. The Arabic treatises turned out to be much richer in content than those known from the ancient tradition. In particular, they contain foundations of deductive systems of mechanics different from those inferred from extant Greek texts, as well as new propositions and theorems. On the other hand, the Arabic treatises also represent knowledge about practical aspects of the construction and use of balances and other machines missing in ancient treatises.

The first phase of the research on the Arabic science of weights was focused on establishing the scope of its extant corpus. Surprisingly, this corpus turned out to be much larger than usually assumed in the history of science. Up to now more than thirty treatises dating from the 9th through to the 19th centuries have been identified which deal with balances and weights in the narrow sense. The majority of these treatises has never before been edited or studied, and only exists in one or more manuscript copies. Some important manuscripts have been discovered or rediscovered even in the course of the research activities conducted by the author.

The textual constituents of the Arabic works on the problems of weights can be classified chronologically into three successive units. First, a set of Greek texts of mechanics extant in Arabic versions. Despite their Greek origin, these works can be regarded as an integral part of the Arabic mechanical tradition, at least because of the influence they exerted on the early works of Arabic mechanics. In the case of some of these texts, although they are attributed to Greek authors, their Greek originals are no more extant nor are they ascribed to their supposed Greek authors in antique sources. The second unit comprises founding texts composed originally in Arabic in the period from the 9th through to the 12th century. This segment of writing laid the theoretical basis of the new science of weights, in close connection with the transla-

tions and editions of texts stemming from Greek origins. The third phase covers the 14th through to the 19th century, and comprises mainly practical texts elaborating on the theoretical foundations laid in the earlier tradition. In the following sections of this article, the texts belonging to these three phases will be described in brief, with a short characterisation of some theoretical contents.

3. ARABIC VERSIONS OF GREEK TEXTS OF MECHANICS

The corpus of Greek texts that were known to scholars of the classical Islamic world through direct textual evidence and dealing with the problems of weighing and the theory of the balance are six in number:

1. *Nutaf min al-ḥiyal*

This is an Arabic partial epitome of Pseudo-Aristotle's *Mechanical Problems*. The *Problemata Mechanica*, apparently the oldest preserved text on mechanics, is a Greek treatise ascribed to Aristotle, but composed very probably by one of his later disciples. It has long been claimed that this text was not transmitted to Arabic culture. It is possible now to affirm that the scholars of Islamic lands had access to it at least through a partial epitome entitled *Nutaf min al-ḥiyal* (elements/extracts of mechanics) included by al-Khāzinī in the fifth book of his *Kitāb mīzān al-ḥikma*.¹³

The text of the *Nutaf* represents indeed a significant partial Arabic version of the *Problemata Mechanica*. Presented under a special title that indicates its character as an excerpt from a longer text, it is attributed directly to Aristotle (it begins with the sentence: "*Qāla Aristūṭālīs*" (Aristotle said)). Its content consists of a reliable abridged version of the preliminary two sections of the pseudo-Aristotelian text where the theoretical foundation of the treatise is disclosed. Thus it includes a methodically arranged compendium of the introduction giving a definition of mechanics and of Problem 1 on the reason of the accurateness in the larger balances to the detriment of smaller ones. As edited in *Kitāb mīzān al-ḥikma*, the *Nutaf* is preceded by a relatively long technical discussion on the balance equilibrium dealing with the different cases of incidence of the axis on the balance beam. In his analysis of this ques-

tion, Al-Khāzinī probably had in mind the Peripatetic second problem of the *Problemata* which investigates the accidents that arise from the suspension of the balance beam from above or from below.¹⁴

2-3. *Maqāla fī 'l-mīzān* and *Kitāb fī 'l-thiql wa 'l-khiffa*

Maqāla fī 'l-mīzān (Treatise on the Balance) and *Kitāb fī 'l-thiql wa 'l-khiffa* (Book on Heaviness and Lightness) are two texts ascribed to Euclid. Extant only in Arabic, the first one provides a geometrical treatment of the balance and presents a sophisticated demonstration of the law of the lever. It is not recorded if it was edited in Arabic, but there is enough evidence to conclude that this was probably the case. The second text survived in a version edited by Thābit ibn Qurra. It is an organised exposition – in 9 postulates and 6 theorems – of dynamical principles of the motion of bodies in filled media, developing a rough analysis of Aristotelian type of the concepts of place, size, kind and force and applying them to movements of bodies.¹⁵

No Euclidean writing on mechanics is extant in Greek and no ancient source ascribes to the Greek geometer a work in this field. Nevertheless, the Arabic manuscript material imputes to him the authorship of these two short texts on the theory of the balance and on some problems of hydrostatic physics. The former was transmitted only in Arabic, whereas the latter is extant in Arabic and in Latin. In form, the two treatises follow the model of Greek mathematical works, as they rest on a set of axioms or postulates on the basis of which a number of mechanical theorems are then proved. The two short tracts complement each other in such a way that it was suggested that they are remnants of a single treatise on mechanics, possibly written by Euclid.¹⁶ However, they might have been granted the Euclidean label for their strict deductive structure, probably during the process of the first editions of the Euclidean corpus in the Antiquity. At any rate, it seems that the two texts were transmitted to Arabic culture after they were already catalogued as Euclidean works.

The Pseudo-Euclidean treatise *Maqāla fī 'l-mīzān* reflects the pattern of a work on the balance done in the context of the Archimedean geometrical statics, making use of its main procedures but without direct mention of the concept of centre of gravity. The short treatise is devoted

exclusively to the study of the theory of the lever in deductive form, and presents a sophisticated demonstration of the law of the lever. It is composed of one definition, two axioms and four propositions. Three manuscript copies of the *Maqāla* are known today: Paris copy (Bibliothèque Nationale de France, MS 2457, folii 21b-22b) Tehran copy (Danishgāh Library, MS 1751, folii 62b-64a) and Mašhad copy (Central Library of Mašhad, MS Astane Quds D 5643, pp. 9-11).¹⁷

The Arabic version of *Kitāb Uqlidis fi 'l-thiql wa 'l-khiffa wa qiyyās al-ajrām ba'ḍihā ilā ba'd* (Book of Euclid on heaviness and lightness and the comparison of bodies one to the other) is extant in Thābit ibn Qurra's revised and corrected edition (*iṣlāḥ*). In general the editorial procedure of *iṣlāḥ* was applied to texts which were transmitted or/and translated under certain defective conditions, so that their first version in Arabic was requiring emendation by an expert. In the case of the present text, the procedure of *iṣlāḥ* meant a more or less heavy editorial revision, which resulted plausibly in that some of the material in the extant version might be accredited to Thābit's revision enterprise.¹⁸

The text is extant in three manuscript copies: Berliner Staatsbibliothek MS 258 (Ahlwardt 6014), folii 439r-440v; London India Office, MS 923 (Loth 744), folii 98v-101r; and Hayderabad, Andra Pradesh Government Oriental Manuscripts Library and Research Institute, Asafiyya Collection, MS Riyāḍī 327, folii 257b-258a.¹⁹ It was also transmitted in two Latin versions, of which at least one was translated from Arabic. The two versions are not radically different from the Arabic text. The proofs of the theorems are, however, more elaborated in the Arabic version.²⁰

4. A partial Arabic version of Archimedes' *On Floating Bodies*

Contrary to the highly creative impact Archimedes had on Arabic mathematics, it seems that his main mechanical treatises such as *Equilibrium of planes* and *Quadrature of the parabola* were not translated into Arabic. However, some elements of his theory of centres of gravity were disclosed in the mechanical texts of Heron and Pappus, whereas the main ideas of his hydrostatics were transmitted in a *Maqāla fi 'l-thiql wa 'l-khiffa*, extant in Arabic in several manuscript copies. This short tract consists in a summarised digest of the treatise on the *Floating Bodies*,

presenting mere statements of the postulates and propositions of Book I and the first proposition of Book II without proofs.

The Book of Archimedes on heaviness and lightness is a brief account of some Archimedean hydrostatical propositions (Book I and Book II-prop. 1), without proofs. Similar to the texts on heaviness and lightness attributed to Euclid and to Menelaus which are extant in short digests in the Arabic tradition, it exists also in two manuscript copies: respectively in Paris and in Gotha: *Maqala li-Arshimidis fi 'l-thiql wa 'l-khiffa* (Paris, Bibliothèque Nationale, MS Codex 2457-n° 4: ff. 22v-23v), and *Muqaddimat Arshimidis wa-qadhayahu fi 'l-thiql wa 'l-khiffa* (Gotha, Forschung- und Landesbibliothek, Codex 1158-n° 2, folios 40v-41v).²¹ We can note easily notable differences between Paris's copy and Gotha's one.

The Arabic text of this Archimedean work was never fully edited before on the basis of the two extant manuscripts. Zotenberg transcribed and published in 1879 the contents of Paris MS, adding no more than some diacritical points, while Gotha MS was mentioned by E. Wiedemann in 1906 and M. Clagett (1959)²² in their respectively German and English translations.

The special importance of the short Arabic version of Archimedes' *On Floating bodies* is multiple. First, it stems from an old tradition, one of the MS sources (Paris MS) dating from the 10th century. Secondly, the Arabic text does not quite conform to the standard Greek one nor to the Latin translation. Now since the Greek and Latin versions are issued from uncertain traditions, the existence of an Arabic version having some original discrepancies in respect to the other existing texts is an important element for any editorial enterprise and for historical understanding of the processes of transmission and reception of this important Archimedian text.

5.6. Heron's and Pappus' *Mechanics*

Two important Greek texts of mechanics are tightly connected with the Arabic tradition of the science of weights; these are two huge treatises referred to as *Mechanics* of the Alexandrian scholars Heron (1st century) and Pappus (4th century). These texts are together major sources for the reconstruction of the history of ancient mechanical ideas. Given their

composite character, only some of their chapters concern the foundations of theoretical mechanics as developed in the later Arabic tradition around the questions of weighing. Heron's *Mechanics* was translated into Arabic by Qusṭā ibn Lūqā under the title *Fī raf' al-ashyā' al-thaqīla* (On lifting heavy loads).²³ After the loss of the Greek original text, it survived only in this Arabic version. On the contrary of Heron's *Mechanics*, Pappus mechanical treatise was preserved in Greek and in Arabic. Its Arabic version is titled *Madkhal ilā 'ilm al-ḥiyāl* (Introduction to the science of mechanics), by a translator who has not yet been identified, but there is enough evidence to affirm that this version saw the light in 10th-century Baghdad.²⁴

7. Menelaus' hydrostatics

Menelaus is one of the scholars of the School of Alexandria in late Antiquity. Known for his *Book on the spherical figures* or *Spherics*, extant in Arabic in the edition of Maṣṣūr b. 'Alī b. 'Irāq, he is also the author of a work on specific gravity: *Kitāb Mānālaus ilā Tarṭas al-Malik fī 'l-ḥīla allatī tu'rafu bihā miqdār kull wāḥidin min 'iddat adjsām mukhtaliṭa* [The book of Menelaus to the King Tartas on the artifice by which is known the quantity each one of many composite bodies], extant in Arabic in a unique manuscript source: El Escorial (Spain) Codex 960 Arabe.²⁵

Further, in Book IV of *The Book of balance of wisdom*, al-Khāzinī described a "balance of Archimedes" according to Menelaus,²⁶ without however giving the title of the latter's work from which he extracted his description. According to al-Khāzinī, in order to ascertain the relation between the weight of gold and that of silver, Archimedes took two pieces of the two metals which were of equal weight, then immersed the scales in water, and produced an equilibrium between them by means of the movable weight: the distance of this weight from the centre of the beam gave him the number required. To find the quantity of gold and of silver contained in an alloy of these two metals, he determined the specific gravity of the alloy by weighing it first in air and then in water, and compared these two weights with the specific gravities of gold and silver. See fig. 6 for the balance of Archimedes given by al-Khāzinī.

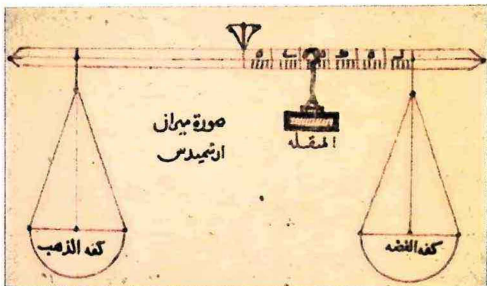


Fig. 6: The balance attributed to Archimedes as depicted in *Kitāb mīzan al-hikma* by al-Khāzinī (Rare Book and Manuscript Library University of Pennsylvania, Schoenberg collection, MS LJS 386, p. 146; online at http://dla.library.upenn.edu/dla/medren/pageturn.html?id=MEDREN_4824919&double-side=0&rotation=0&size=2¤tpage=116).

Archimedes' balance consists of a balance of two equal arms from which two steady plates are hung. Furthermore, it has a *minqala* or *rummāna* (counterweight) on one of the arms which can be hung to some point of a little graduated scale marked with two series of divisions. Presented as a hydrostatical balance specialised in the determination of specific gravities of gold and silver, this instrument could also be employed in the ordinary operations of weighing.

Furthermore, the Arabic works on balances and weights linked with Menelaus contains another final text. In 1979, Anton Heinen discovered in Lahore (Pakistan) an Arabic manuscript containing a summary of Menelaus' work by Ibn al-Haytham. He announced afterwards a project of edition including this text, besides Menelaus' manuscript held in El-Escorial and al-Bīrūnī's *On the proportions between metals and jewels in volume*, to reconstruct the corpus of the Arabic tradition of works on specific gravities.²⁷ Unfortunately, the sudden death of Heinen in April 1979 put an end to this project.

4. A PARTIAL ARABIC VERSION OF ARCHIMEDES' ON FLOATING BODIES

In close connection with the translation and study of the above mentioned Greek sources, the scholars of the Islamic world composed in the period from the 9th up to the 12th century a set of original texts that laid the foundation for the new science of weights. To mention just the main treatises, these texts are seven in number :

8. *Kitāb fi 'l-qarastūn*

Without contest, *Kitāb fi 'l-qarastūn* by Thābit ibn Qurra (d. 901) is the most important text of the Arabic mechanical tradition; it was apparently one of the first Arabic texts to deal with the theory of the unequal-armed balance in Islam and to systematise its treatment. As such, and structured in the shape of a deductive theory of the steelyard based on dynamic assumptions, it established the theoretical foundation for the whole Arabic tradition. Thābit ibn Qurra's fundamental treatise was translated into Latin in the 12th century by Gerard of Cremona under the title *Liber karastonis*.²⁸

Kitāb fi 'l-qarastūn is extant in four known copies, of which three contain complete texts with variant readings. Two of these, preserved in London (India Office MS 767-7) and Beirut (St.-Joseph Library, MS 223-11), were studied and published recently.²⁹ The third copy, formerly conserved in Berlin (Staatsbibliothek MS 559/9, ff. 218b-224a), was reported lost at the end of World War II. In October 1996, I rediscovered it in the Biblioteka Jagiellonska in Krakow (Poland). Recently, my attention was attracted over a partial fourth manuscript source that exists in the archives of the Laurentiana Library in Florence (MS Or. 118, ff. 71r-72r). Never mentioned before, this valuable three-page text includes the introductory two sections of Thābit's treatise. This part of the text exposes the dynamic foundation of the treatise and an important passage that was thought of up to now to occur only in the Beirut copy (and thus known as Beirut scholium).³⁰

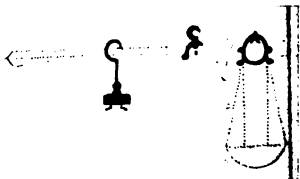


Fig. 7: Picture of the "common balance" (*mīzān maṣhūr*) reproduced in Book II of *Kitāb mīzan al-ḥikma* by al-Khāzinī for the illustration of al-Isfizārī's description of the steelyard. Saint Petersburg, the Russian National Library, MS Khanikoff, Coll. 117, f. 30b. (courtesy of the Russian National Library, Saint Petersburg).

9. *Kitāb fī ṣifāt al-waẓn*

Kitāb fī ṣifāt al-waẓn (Book on the conditions of equilibrium) by the same Thābit ibn Qurra is a five-section text on the balance and is about the conditions necessary to achieve equilibrium in weighing with balances, primarily the equal-armed sort.³¹ Only in the third section is the uneven-armed balance or the steelyard (called here also *qarastūn*), touched upon. This slight treatment of the steelyard was probably prior to Thabit's systematic investigation we find in *Kitāb fī 'l-qarastūn*. An important connection between the latter and *Ṣifāt al-waẓn* is provided by the occurrence, in the last section of *Ṣifāt al-waẓn*, of the statement of a proposition identical with the postulate that opens *Kitāb fī 'l-qarastūn*.

Thābit ibn Qurra's *On the conditions of equilibrium* was intended as a manual addressed to practitioners of the art of weighing, essentially those specialised in the equal-armed balance. The theory exposed in it, is very elementary and deals with such questions as: what's the cause of equilibrium which occurs between equal and unequal weights in the balance; what are the conditions to respect in order to obtain accurate weighings in various cases (equal or unequal weights, with equal or unequal levers, weighing in the same medium or in different media). Nevertheless, although the aim of this short treatise is more technical, it contains two passages relevant to theoretical analysis as expounded by the author in his major treatise on the steelyard.

10. *Ziyyāda fī 'l-qarastūn*

Ziyyāda fī 'l-qarastūn or An Addition on the theory of the *qarastūn* is a short anonymous text extant in a unicum copy preserved in MS Beirut

223 (folios 100-106) mentioned above. In this codex, the *Ziyyāda* serves as an appendix to *Kitāb fī 'l-qarastūn*. The two texts are written in the same hand and display strong terminological affinities which include the basic vocabulary as well as the technical terms. Thābit ibn Qurra is mentioned twice in the *Ziyyāda*. This and several other elements induce us to consider it as an appendix intended to amplify the analysis developed in Thābit's original work. The text of the *Ziyyāda* is composed of five propositions; the first four propositions are accompanied by geometrical proofs, whereas the fifth has only a statement. The first two are mere applications of the theorem of substitution or the Proposition VI of *Kitāb fī 'l-qarastūn*, whilst the last three establish a procedure for calculating the counterweight required to maintain equilibrium in a lever divided an evenly number of times.³²

11. A text on the balance by Al-Ahwāzī

Muḥammad ibn 'Abd-Allāh b. Maṣṣūr al-Ahwāzī is a mathematician of the 10th century. He is the author of a short text on the balance, extant in a unique copy preserved in Khuda Baksh Library in Patna (Codex 2928, folio 31) without title, save for the one provided by the curators of the library: *Risāla fī 'l-mizān*.³³

Al-Ahwāzī's treatise may be divided in several main sections devoted, respectively, to the distinction between the "normal balance" and the steelyard, the formulation of the law of the lever (illustrated by numerical examples), the problem of repairing and calibrating a beam by putting marks, the determination of the counterpoise (*al-rummāna*) when the original is lost, and, finally, the making of different balances: an equal-armed one behaving like a *qarastūn* (one of its plates is mobile along an arm of the balance), another one with three plates, and a third one with four plates suspended from the ends of two perpendicular and equal beams.

12. The treatises on centres of gravity of al-Qūhī and Ibn al-Haytham

These important contributions by two most important Islamic mathematicians of the 10th-11th centuries survived only through their reproduction by al-Khāzinī in a joint abridged version that opens the first book of his *Kitāb mizān al-ḥikma* (main theorems relative to centres of

gravity according to Abū Sahl al-Qūhī and Ibn al-Haytham al-Baṣrī).³⁴ We know from independent sources that al-Qūhī and Ibn al-Haytham wrote on centres of gravity, but their works have not yet been found. Al-Khāzinī's text is, for the moment, the only source for their achievements in this field. The potential discovery of the complete versions of these texts will mean the recovery of fundamental sources.³⁵

Al-Khāzinī's edition consists in a very schematised exposition made of statements without proofs, but it shows clearly the familiarity of Arab scholars with the fundamental ideas of Greek works on centres of gravity, which they developed and deepened to a large extent.

13. Al-Qūhī on the law of the lever

In the correspondence on scientific issues that occurred around 990-991 between al-Qūhī with Abū Ishāq al-Šābī, we find precious information on some statements on the centres of gravity and the law of the lever by al-Qūhī.³⁶ The correspondence between al-Qūhī and al-Šābī represents an important document on a scientific discussion between an accomplished mathematician and an enthusiastic amateur in the 10th century. The debate on the barycentric theory intervenes in the correspondence as follows. The exchange began by a letter from al-Qūhī in which is stated, results of his research on centres of gravity. Further, he promised to send a copy of his book on this topic. In a subsequent letter, al-Šābī requested details on the subjects mentioned by al-Qūhī. Some time passes and al-Qūhī did not reply; this prompts al-Šābī to write again, repeating once more his previous requests. In his reply, al-Qūhī refers, among other topics, to the book he had written on centres of gravity, of which he has completed six chapters and plans to write four or five more. Al-Šābī's answer comprises what he believes to be a counterexample to the unrestricted validity of the law of the lever. Later, al-Qūhī answers his correspondent objections and exposes the error in al-Šābī's counterexample to the law of the lever, and he distinguished between "generally accepted" and "necessary" premises. It seems that the correspondence stopped at this point, as there is no record of a new objection from al-Šābī to al-Qūhī's decisive arguments.

The sixth and last letter of this precious correspondence is the most important part from the point of view of statics. First, it provides

decisive evidence that al-Qūhī had produced at the time of this epistolary exchange an alternative proof of the law of the lever in his treatise on centres of gravity. Al-Qūhī was an accomplished mathematician as shown by his extant work, and he never failed to provide mathematical proofs to his propositions. On the other hand, this part of the correspondence, besides providing important data on the mechanical debates in the 10th century, contains al-Qūhī's detailed epistemological discussion of the status of the law of the lever. This discussion is a valuable historical document of which the argument did not occur elsewhere, as far as we know, in all the corpus of ancient and medieval mechanics.

14. *Maqāla fī 'l-makāyyīl wa al-awzān*

Īlyā al-Maṭrān was the Archbishop of Nisibin (north Mesopotamia) in the first half of the 11th century. His *Maqāla fī 'l-makāyyīl wa al-awzān* (Treatise of measures and weights) is essentially of practical interest, but it is based on the theory of the steelyard as elaborated in earlier Arabic works, and mixes theoretical and practical considerations.³⁷

The Book of Measures and Weights is extant in five known copies: four are reserved in Cairo (Dar al-kutub, MS DR 92, MS DR 1046, MS TR 199, MS TR 341), and one is in Paris (Bibliothèque Nationale, MS 206). There existed a complete copy in Gotha (MS 1331), but it seems that it was lost.³⁸ The Paris copy is very incomplete, but the text can be reconstructed from the four Cairo MS copies, which were preserved in excellent condition. The relatively high number of extant copies is an indication on the diffusion and probable influence the work had.

15. *Irshād dhawī al-'irfān ilā šinā'at al-qaffān*

A fundamental and long-neglected treatise, the *Irshād dhawī al-'irfān ilā šinā'at al-qaffān* (Guiding the Learned Men in the Art of the Steelyard) was written by Abū Ḥātim al-Muẓaffar b. Ismā'īl al-Isfizārī. Al-Isfizārī was a mathematician and mechanic who flourished in Khurasān (north-east Iran) around 1050-1110. His important treatise is extant in a unique manuscript copy preserved in Damascus (the Syrian National Library, al-Ẓāhiriyya collection, MS 4460, folii 16a-24a). In addition, an abridged version reproduced by al-Khāzinī includes a section on the construction and use of the steelyard, which is omitted from the Damascus manuscript.³⁹

In this original text on the theory and practice of the unequal-armed balance, different textual traditions from Greek and Arabic sources are compiled together for the elaboration of a unified mechanical theory. Although this text is the most significant writing of al-Isfizārī, it has never been published nor translated into any language in full, before the author of this article began his investigations on it.⁴⁰

In content, proofs and terminology, the treatise *Irshād* of al-Isfizārī reveals itself as a major source for the reconstruction of the tradition of Arabic theoretical mechanics. In it, al-Isfizārī attempted to build a theory of the science of weights based on the barycentric considerations borrowed from Pseudo-Euclid's text on the balance *Maqāla fī 'l-mīzān* and the dynamic orientation that guided Thābit ibn Qurra in *Kitāb fī 'l-qarastūn*.

The structure of the *Irshād* is elaborated in the form of four layers as follows. First, the problem of the center of gravity is discussed in relation to the law of the lever, then a proof of the law of the lever is presented, based on the demonstration of this theorem in Thābit ibn Qurra's *Kitāb fī 'l-qarastūn*. The third layer is a systematic review of Pseudo-Euclid's *Maqāla fī 'l-mīzān*; and finally Propositions 4-5 of *Kitāb fī 'l-qarastūn* are reworked in the last and fourth section.

16. *Kitāb mīzān al-ḥikma*

The famous *Book of the Balance of Wisdom* by al-Khāzinī deserves a special mention in the Arabic tradition of the science of weights. Conceived of by the author as an encyclopedia of mechanics, *Kitāb mīzān al-ḥikma* was completed by al-Khāzinī in 1121-22. The extensive treatise has the form of a real mine of information on all aspects of the theoretical and practical knowledge in the Islamic medieval area about balances. The book covers a wide range of topics related to statics, hydrostatics, and practical mechanics, besides reproducing abridged editions of several mechanical texts by or ascribed to Greek and Arabic authors. This huge summa of mechanical thinking provides a comprehensive picture of the knowledge about weights and balances available in the Arabic scientific milieu up to the early 12th century. Therefore, it represents a major source for any investigation on ancient and medieval mechanics.⁴¹

In the second part of his book, al-Khāzinī described a sophisticated balance capable of measuring absolute and specific weights of solids and liquids and of calculating exchange rates of currencies. This balance was used for ordinary weighing, as well as for all purposes connected with the measuring of specific gravities, distinguishing of genuine and false metals, examining the composition of alloys, etc. In all these processes the plates are moved until equilibrium is obtained and the desired magnitudes in many cases can at once be read on the divisions of the beam. This balance, called by its author *mīzān al-ḥikma* (balance of wisdom, see fig. 8) and *al-mīzān al-jāmi'* (the universal balance), represented the culminant point of centuries of developments in the science of weighing and of the determination of specific gravities in the Islamic world.

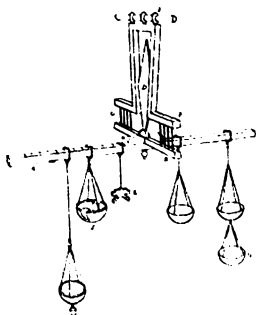


Fig. 8: Modern diagram of the balance of wisdom.

17-21. Additional texts

The textual tradition of the Arabic science of weights between the 9th and the 12th centuries also contains additional sources that should be taken into account in any complete reconstruction of its corpus. These include the work of Muḥammad Ibn Zakariyyā al-Rāzī (865-923) on the natural balance,¹² extracts from texts on weights by Qusṭā ibn Lūqā

and Ishāq ibn Hunayn,⁴³ Ibn al-Haytham's largely expanded recension of Menelaus' text on specific gravities (mentioned above),⁴⁴ and two writings on specific gravity and the hydrostatical balance by 'Umar al-Khayyām.⁴⁵

5. TEXTS OF THE LATER PERIOD

The third and last phase of the Arabic writings on weights and balances is represented by a group of texts dating from the 14th to the 19th century and originating principally from Egypt and Syria. These two countries were unified during this long period by the Ayyubid, Mameluk, and Ottoman dynasties, respectively, and they constituted for centuries a unified economic and cultural space. Whence the *raison d'être* of this large amount of writings on the theoretical and practical problems of the balance and weights, since it was a direct outcome of the integration of economic and cultural activities in this vast area. The authors of these texts are mathematicians, mechanicians, and artisans. In the following some names and works are mentioned for illustration.

22. *Masā'il fī 'l-mawāzīn* (Problems on balances) by Ya'ish b. Ibrāhīm al-Umawī: This short tract is by a mathematician of Andalusian origin who lived in Damascus (fl. 1373), and is known as the author of several arithmetical works.⁴⁶ His *Masā'il* consists of a small collection of problems about weighing with hydrostatic and normal balances. The text is part of the codex DR 86 preserved in the Egyptian National Library in Cairo.

23. *Risāla fī 'amal al-mīzān al-ṭabī'ī* by Taqī al-Dīn ibn Ma'rūf: The author is a well known mathematician, astronomer, and mechanician (born in Damascus in 1525-died in Istanbul in 1585). His short treatise on making the natural balance describes what was transmitted to Taqī al-Dīn in a previous narrative on the balance that he ascribes to the mathematician Ghiyyāth al-Dīn al-Kāshī (died in Samarkand in 1429). It is part of the collections of the municipal library of Alexandria, Egypt.

24. *'Amal mīzān li-ṣarf al-dhahab min ghayr sanj* (The construction of a balance to convert gold without standard weight) by Abū 'l-'Abbās Aḥmad ibn al-Sarrāj. The author, who was alive around 714 AH (1319-20) and 748 AH (1347-8), was the most important specialist of astronomical instrumentation in the Mamluk period.⁴⁷ His short text is

the sixth item of the codex MR 30 conserved in the Egyptian National Library in Cairo.

25-28. The Egyptian astronomer Muḥammad ibn Abī al-Faṭḥ al-Šūfī (d. 1543) composed several treatises on the theory and the practice of the steelyard balance which enjoyed a wide diffusion. Al-Šūfī seems to be the last original representative of the classical Arabic tradition of works on balances and weights. With him, this tradition arrives at an end, in the same time as pre-classical physics in Europe was operating a deep transformation that integrated the science of weights in modern physics. Here are his main treatises, known in several extant copies preserved exclusively in Cairo and Damascus, attesting to their widespread use in Egypt and Syria over the centuries:

25. *Risāla fī šinā'at al-qabbān* (Treatise in the art of the steelyard): a systematic description of the steelyard and its use in different situations, showing a clear acquaintance with steelyards. The text is explicitly written for the practitioners;

26. *Irshād al-wazzān li-ma'rifat al-awzān bi-'l-qabbān* (Guide to the weigher in the knowledge of the weights of the steelyard): similar to the previous text;

27. *Risāla fī qismat al-qabbān* (Treatise on the division of the steelyard): contains arithmetical and geometrical problems on the calculation of the parts of the steelyard;

28. *Risāla fī iṣlāḥ fasād al-qabbān* (Treatise on repairing the defectiveness of the steelyard): very detailed analysis of the different cases of deficiency of a steelyard and the solutions to repair these deficiencies.

Other later texts include:

29. *Nukhbat al-zamān fī šinā'at al-qabbān* : a short text on the steelyard by 'Uthmān b. 'Alā' al-Dīn al-Dimashqī, known as Ibn al-Malik (fl. 1589);

30. *Risālat al-jawāhir fī 'ilm al-qabbān* (Treatise of jewels in the science of the steelyard): a ten-chapter text written by Khiṣr al-Burluṣī al-Qabbānī (d. in 1672);

31. Two writings on the "science" ('ilm) and the "description" (*ta'rīf*) of the steelyard by 'Abd al-Majīd al-Sāmūlī (18th century);

32. *Al-'Iqd al-thamīn fīmā yata'allaq bi-'l-mawāzīn* (The high priced necklace in what concerns the balances): a systematic treatise on the balance and weights, by Ḥasan al-Jabartī (1698-1774);

33. Several short texts dealing with the principles and the construction of the steelyard by Muḥammad al-Ghamrī (died before 1712);

34. *Risāla fī 'l-qabbān* by Muḥammad b. al-Ḥusayn al-'Aṭṭār (d. 1819), a Syrian author, is among the very last works written in Arabic in the style of the earlier mechanical tradition.⁴⁸

For some other texts, the authorship is not yet firmly established, as they do not bear any name and they are catalogued as "anonymous texts". In this last category, we mention the following three tracts, which are very probably connected with the texts of the later period above:

35. First, a huge summa titled *Al-qawānīn fī ṣifat al-qabbān wa 'l-mawāzīn* (The laws in the description of the steelyard and the balances): Codex TR 279, ff. 1-62 in the Cairote Dār al-kutub;

36. Then a short text, *Bāb fī ma'rifat 'amal al-qabbān* (Chapter in the knowledge of making the steelyard): Cairo, Dār al-kutub, MS K3831/1, and MS RT 108/1;

37. An untitled tract of which the beginning is "*hādhihi risāla fī 'ilm al-qabbān*": Cairo, Dār al-kutub, in the same MS K3831;

38. And finally two short tracts (*Risāla mukhtaṣara fī 'ilm al-qabbān* and *Risāla fī 'ilm ṣinā'at al-qabbān*) preserved in Damascus (National Library, al-Zāhiriyya Collection, MS 4).⁴⁹

The texts mentioned so far afford a precious testimony to the fact that scientific and technical works—sometimes with a high level of originality—continued to be composed in Arabic in the field of mechanics until the 19th century. This corresponds with similar information derived from recent research in other fields of Arabic sciences, such as astronomy and mathematics. The ongoing research into this later phase will undoubtedly change our appreciation of the historical significance of Arabic science and of its place in the general history of science and culture.

6. THE STATUS OF THE SCIENCE OF WEIGHTS

The availability of the major part of the Arabic texts on the problems of weights and balances makes it possible, for the first time, to address the question of the historical significance of this large corpus of mechanical works.

The investigation of this question has already led to a far-reaching conclusion. This corpus represents no less than the transformation of the ancient mechanics into a systematic science of weights and balances. As disclosed in the treatises of Pseudo-Aristotle, Philon, Heron, and Pappus, the Greek classical doctrine of mechanics was shaped as a collection of descriptions and riddles about machines, instruments, and common observation. In contradistinction, the new Arabic science of weights is focused on a relatively small range of subjects – mainly the theory of the balance and equilibrium and the practical issues of weighing with different instruments. On the conceptual level, it is built on a dynamic foundation and seeks to account for mechanical phenomena in terms of motion and force. As such, it restores a strong link between mechanics and natural philosophy. This new science of weight lasted in Arabic culture until the 19th century and constituted since the 12th century a basis for the Latin *scientia de ponderibus* that developed in western Europe.

The emergence of the Arabic science of weights has been proclaimed by al-Fārābī (ca. 870-950) in his *Ihṣā' al-'ulūm*, where he produced an authoritative reflexion on the epistemological status of mechanics that set the stage for the question once and for all. In particular, he set up a demarcation line between the science of weights and the science of machines, and considered both as mathematical disciplines.

Al-Fārābī differentiated in his system between six principal sciences: those of language, logic, mathematics, nature, metaphysics and politics. Mathematics is subdivided into seven disciplines: arithmetics, geometry, perspective, astronomy, music, the science of weights (*'ilm al-athqāl*) and the science of devices or machines (*'ilm al-ḥiyāl*). The last two are characterised as follows:

As for the science of weights, it deals with the matters of weights from two standpoints: either by examining weights as much as they are measured or are of use to measure, and this is the investigation of the matters of the doctrine of balances (*'umūr al-qawl fī 'l-mawāzīn*), or by examining weights as much as they move or are of use to move, and this is the investigation of the principles of instruments (*'uṣūl al-ālāt*) by which heavy things are lifted and carried from one place to another.

As for the science of devices, it is the knowledge of the procedures by which one applies to natural bodies all that was proven to exist in the mathematical sciences... in statements and proofs unto the natural bodies, and [the act of] locating [all that], and establishing it in actuality. The sciences of devices is therefore that which supplies the knowledge of the methods and the procedures by which one can contrive to find this applicability and to demonstrate it in actuality in the natural bodies that are perceptible to the senses.⁵⁰

Considering the two main branches of mechanics as genuine mathematical sciences, al-Fārābī located their objects respectively in the study of weights and machines. Hence, *‘ilm al-athqāl* is centered on the principles of the balances and of lifts, investigated with reference to measure and motion, whereas *‘ilm al-ḥiyal* is conceived of as the application to natural bodies of mathematical properties (lines, surfaces, volumes, and numbers). As such, it includes various practical crafts: the overseeing of constructions, the measurement of bodies, the making of astronomical, musical, and optical instruments, as well as the fabrication of hydraulic mechanisms, mirrors, and tools like bows, arrows and different weapons.⁵¹

In this context, the main function of *‘ilm al-ḥiyal* consists of bringing the geometrical properties from potentiality (*quwwa*) to actuality (*fi’l*) and to apply them to real bodies by means of special engines (*bi-’l-ṣan’a*).⁵² Developing an Aristotelian thesis,⁵³ al-Fārābī endows the science of machines with an eminent task, to actualise the mathematical properties in natural bodies. Such a function of actualisation could not be extended to *‘ilm al-athqāl*. In fact, weight and motion, the two notions that delimit its field of investigation, can hardly be taken as geometric properties of natural bodies, limited by al-Fārābī to spatial and numerical aspects, in accordance with the canonical Euclidean paradigm that banishes all the material properties of magnitudes from the realm of geometry.

The distinction of the science of weights from the different crafts of practical mechanics, is a crucial result of al-Fārābī’s theory. The emphasis laid by the Second Master on *‘ilm al-athqāl* can not be stressed enough. It means no less than a solemn announcement of the emergence of an independent science of weights. With roots in the long tradition of

the ancient mechanics, this new discipline came to light in the second half of the 9th century in the works of Thābit ibn Qurra and his colleagues in Arabic science.⁵⁴ It is this important scientific achievement that was recorded by al-Fārābī while building his system of knowledge.

Al-Fārābī's thesis had a long-lasting resonance in Arabic learning and was never seriously challenged. The fundamental singularity of the science of weights as an independent branch within the mathematical arts, distinct from the science of machines, became a feature of subsequent theories of science. For confirmation a great number of cases, in different kinds of works and in various literary contexts, can be called upon. Hereinafter, some of these are presented in chronological order.

In his *Risāla fī aqsām al-'ulūm al-'aqliyya* (Epistle on the parts of rational sciences), Ibn Sīnā (980-1037) enumerated the mechanical arts, considered as 'secondary constituents' of geometry, as '*ilm al-ḥiyal al-mutaḥarrika* (the science of movable machines, i.e., automata),⁵⁵ the pulling of weights (*jarr al-athqāl*), the science of weights and balances ('*ilm al-awzān wa al-mawāzīn*), and the 'science of particular machines' ('*ilm al-ālāt al-juz'īyya*).⁵⁶ Ibn Sīnā establishes a clear distinction between the science of weights and balances, the craft of pulling heavy loads, and the art of devices. In addition, the latter is subdivided into the arts of automata and of particular machines. Likewise, the pulling of weights, included in the science of weights by al-Fārābī, is assigned as a specific branch of geometry. The main point, however, in Ibn Sīnā's schema is the emphasis laid on the science of *awzān* and *mawāzīn* in which weights and balances are combined. The reference to the *wazn* instead of the *thiqal* could be interpreted as a privilege given to the statical standpoint. Indeed, the *wazn* is a constant quantity measurable in a balance, whereas the *thiqal* is that quantity – called gravity or heaviness – which varies during the weighing process and depends on the position of the weighed object relatively to a particular point, the centre of the world or the fulcrum of the balance.⁵⁷

In his discussion on the divisions of science in *Maqāṣid al-falāsifa* (The Intentions of philosophers), al-Ghazālī (1058-1111) subsumed the science of weights ('*ilm al-athqāl*') as an independent branch under the mathematical arts and differentiates it from the study of ingenious devices ('*ilm al-ḥiyal*').⁵⁸ Ibn Rashīq, a Moroccan mathematician of the

late 13th century, assumed a similar demarcation between weights and machines, and founded the latter on the former: the science of weights, of balances, and of catapults (*'ilm al-athqāl wa 'l-mawāzīn wa 'l-majānīq*) deals with the downward motion of heavy bodies and constitutes the foundation of the science of machines (*wa-yatarattab 'alā 'ilm al-athqāl 'ilm al-ḥiyāl*).⁵⁹ In his biography of al-Isfizārī, al-Bayhaqī did not confuse the two, when he reported that al-Isfizārī "was mostly inclined to astronomy and to the science of weights and machines (*'ilm al-athqāl wa al-ḥiyāl*)."⁶⁰ This corresponds to what we know of his extant works in mechanics, the *Irshād* being clearly a book of *athqāl*, whereas al-Isfizārī's work on *ḥiyāl* is represented by a collection of compiled summaries (sometimes with comments) extracted from the mechanical works of Heron, Apollonius and Banū Mūsā.⁶¹ Later on, Taqī al-Dīn ibn Ma'rūf, the 16th-century mechanician, followed the same pattern. Accounting for the books he read in his scientific curriculum, he mentioned, in addition to texts of mathematics, "books of accurate machines (*kutub al-ḥiyāl al-daqīqa*), treatises of the science of the steelyard and of the balance (*rasā'il 'ilm al-qarastūn wa al-mīzān*), and of the pulling of weights (*wa-jar al-athqāl*)."⁶²

Sometimes *'ilm al-athqāl* is referred to as *'ilm marākiz al-athqāl*, one of its branches which enjoyed great reputation. A good instance of this is the following quotation extracted from the correspondence between Al-Qūhī and Al-Ṣābī. In a letter to Al-Qūhī, al-Ṣābī says:

We did not obtain a complete book on this science, I mean centres of gravity (*marākiz al-athqāl*), nor was there done any satisfactory work by one of the ancients or one of the moderns. In my opinion it is in the rank of a singular science which merits to have a book of basic principles (*al-ṣinā'a al-mufrada allatī yuḥtāj an yu'mal lahā kitāb 'uṣūl*).⁶³

A century later, al-Isfizārī qualified the centres of gravity as "the most elevated and honorable of the parts of the mathematical sciences" and defined it as:

the knowledge of the weights of loads of different quantities by the [determination of the] difference of their distances from their counterweights (*Irshād*, f. 16b).

Al-Khāzinī further specifies further the definition of his predecessor when he explains that the study of the steelyard is founded upon the science of the centres of gravity (*wa 'alayhi mabnā al-qaffān*).⁶⁴ Therefore, it is obvious that the expression *marākiz al-athqāl* is intended to account for the statical aspect of 'ilm al-athqāl, by the study of forces as they are related to weights, such as in the case of levers and scales. This same thesis is assumed by other Islamic scholars.⁶⁵

In contrast, the tradition of *ḥiyal* delimits the contours of a distinct discipline, centred on the investigation of the methods of applicability of mathematical knowledge to natural bodies. As represented in several Greek and Arabic mechanical texts, written by Heron, Pappus, Philon, Banū Mūsā and al-Jazarī, the tradition of *ḥiyal* is focused on the description of machines and the explanation of their functions. Book I of Heron's treatise contains principles of theoretical mechanics, but the rest, more than three quarters of the whole, is predominantly about different kinds of devices. The same applies to the treatise of Pappus. As for Philon of Byzantium (fl. 230), his *Pneumatics* is just a catalogue of machines worked by air pression.⁶⁶

An important constituent of the Greek traditional doctrine of mechanics – as it is disclosed in the texts by Pseudo-Aristotle, Heron and Pappus – is represented by the theory of the simple machines (the windlass, the lever, the pulley, the wedge, and the screw). Those simple machines were dealt with in Arabic science by several scholars such as Ibn Sīnā,⁶⁷ al-Isfizārī,⁶⁸ and Sinān ibn Thābit⁶⁹ under the name of *ḥiyal*. Besides this trend on the basic simple machines and their combinations, the science of *ḥiyal* also included a description of other categories of machines necessary in daily life and useful for civil engineering. The most well known works describing these kind of engines, are the texts of machines by Banū Mūsā and al-Jazarī. *Kitāb al-ḥiyal* by the Banū Mūsā comprises a large variety of devices, the vast majority of which consist of trick vessels for dispensing liquids. The book of al-Jazarī *al-Jāmi' fi ṣinā'at al-ḥiyal* enlarges this same feature in an unprecedented way. The author incorporates in it the results of 25 years of research and practice on various mechanical devices (automata, musical machines, clocks, fountains, vessels, water-raising machines, etc.)⁷⁰

The conception of *ḥiyal* as the practical component of mechanics is

additionally corroborated by the contents of a chapter of the *Mafātīḥ al-ʿulūm* by Muḥammad b. Yūsuf al-Khwārizmī (10th century). Chapter 8 of Book II of this lexicographic encyclopedia is dedicated to “*ṣināʾat al-ḥiyāl, tusammā bi al-yūnāniyya manjanīqūn*” (the art of machines, called in Greek *manjanīqūn*). Besides a short mention of machines for the traction of weights, the *ḥiyāl* described are essentially of two types: automata (*ālāt al-ḥarakāt*) and hydraulic devices (*ḥiyāl ḥarakāt al-mā*).⁷ The author devotes great attention to the first two kinds; this might be taken as evidence of the pre-eminence of these machines in the domain of *ḥiyāl* in his time. Significantly, al-Khwārizmī – like Ibn Sīnā – classifies the weight-pulling machines in the field of *ḥiyāl* in contrast with their arrangement among that of *athqāl* by al-Fārābī.

The analysis of the overall significance of the Arabic medieval science of weights showed that this tradition does not represent a mere continuation of the traditional doctrine of mechanics as inherited from the Greeks. Rather, it means the emergence of a new science of weights recognised very early on in Arabic learning as a specific branch of mechanics, and embodied in a large scientific and technical corpus. Comprehensive attempts at collecting and systematising (as well as updating with original contributions) the mainly fragmentary and unorganised Greco-Roman mechanical literature that had been translated into Arabic, were highly successful in producing a coherent and orderly mechanical system. In this light, a redefinition of Arabic mechanics becomes necessary, initially by questioning its status as a unified field of knowledge. Such a redefinition may be worked out briefly by setting a sharp distinction between ‘*ilm al-athqāl*’ and ‘*ilm al-ḥiyāl*’. The latter corresponds to the traditional descriptive doctrine of machines, whereas the core structure of the ‘*ilm al-athqāl*’ is determined by the balance-lever model and its theoretical and practical elaborations. Uniting the theoretical treatment of the balance with concrete practical information about its construction and use, and adopting an integrative treatment of physics and mechanics, overcoming their original separation in Antiquity, the new science of weights distinguishes itself by turning mechanics from being originally a marginal part of geometry into an independent science providing the theoretical branch of mechanics.

On the methodological level, the new science of weights was marked

by a close combination of experimentation with mathematisation. The Aristotelian qualitative procedures were enriched with quantitative ones, and mathematics was massively introduced in the study of mechanical problems. As a result, mechanics became more quantitative and the results of measures and experiments took more and more weight in mechanical knowledge. Certainly, the fundamental concepts of Aristotelian physics continued to lie in the background, but the scholars were able to cross their boundaries and to accomplish remarkable discoveries in physical ideas. For instance, the generalisation of the theory of centres of gravity to three-dimensional objects, the introduction of a dynamic approach in the study of problems of statics and hydrostatics, the improvement of the procedures and methods for the determination of specific weights and of weighing instruments, the development of the theory of heaviness and the establishment of a theory of the ponderable lever. Further, the treatment of the law of equilibrium by Thābit ibn Qurra and al-Isfizārī opened the horizon of a unified theory of motion in which the dichotomies of natural-violent, upward-downward motions vanish, exactly as they disappear in the concomitant motions of the two arms of a balance lever. In this physical system, indeed, the weight of the body might be considered the cause of the downward as well as of the upward motion, overcoming the Aristotelian balking at making weight a cause of motion. For their part, al-Qūhī and Ibn al-Haytham had the priority in formulating the hypothesis that the heaviness of bodies vary with their distance from a specific point, the centre of the earth. Moreover, they contributed to unify the two notions of heaviness, with respect to the centre of the universe and with respect to the axis of suspension of a lever. In his recension of the works of his predecessors, al-Khāzinī pushed forward this idea and drew from it a spectacular consequence regarding the variation of gravity with the distance from the centre of the world. All this work represented strong antecedents to the concept of positional weight (*gravitas secundum situm*) formulated by Jordanus in the 13th century.⁷²

7. FOR AN INTERCULTURAL HISTORY OF MECHANICS

The historians of mechanics, from Pierre Duhem until Marshal Clagett, assumed that the foundation of the science of weights must be credited

to the school of Jordanus in Europe in the 13th century. Now it appears that this science emerged much earlier in Islamic science, in the 9th century. Moreover, the first steps of the Latin *scientia de ponderibus* should be considered as a direct result of the Arabic-Latin transmission, and especially as a consequence of the translation of two major Arabic texts in which the new science and its name are disclosed, *Kitāb fī 'l-qarastūn* by Thābit ibn Qurra and *Iḥṣā' al-'ulūm* by al-Fārābī.

Indeed, the very expression *scientia de ponderibus* was derived from the Latin translation of al-Fārābī's *Iḥṣā' al-'ulūm*. Versions of this text were produced both by Gerard of Cremona and Dominicus Gundissalinus. The latter made an adapted version of the *Iḥṣā'* in his *De scientiis* and used it as a framework for his own *De divisione philosophiae*, which later became a guide to the relationships between the sciences for European universities in the 13th century. In the two texts, Gundissalinus reproduced – sometimes verbatim – al-Fārābī's characterisation of the sciences of weights and devices, called respectively *scientia de ponderibus* and *sciencia de ingeniis*.⁷³ The reason for this close agreement is easy to find: he could not rely on any scientific activity in this field in his times in Latin.⁷⁴ Among all the sciences to which Gundissalinus dedicated a section, the science of weights, of devices, and of optics were obviously less known in the Latin west in the 12th century. Even the antique Latin tradition represented by Boece and Isidore of Sevilla could not furnish any useful data for a sustained reflection on their epistemological status. It must also be added that Gundissalinus seems to ignore all their developments in the Arabic science, including Thābit ibn Qurra's book on the theory of the balance and Ibn al-Haytham's achievements in optics. Hence, the effort of theorisation deployed by Gundissalinus, by showing the state of the sciences in the late 12th century in Western Europe, throws light on a considerable underdevelopment in several sciences. This concerns, particularly, the different branches of mechanics.⁷⁵

As said before, *Liber karastonis* is the Latin translation by Gerard of Cremona of *Kitāb fī 'l-qarastūn*. The general structure of both Arabic and Latin versions is the same, and the enunciations of the theorems are identical. Yet the proofs might show greater or lesser discrepancies. None of the Arabic extant copies of Thābit's *Kitāb* seem to be the direct

model for Gerard's translation. The Latin version was repeatedly copied and distributed in the Latin West until the 17th century, as it is documented by several dozens of extant manuscript copies. This high number of copies instructs on the wide diffusion of the text. Further, the treatise was embedded into the corpus of the science of weights which was understood to be part of the mathematical arts or quadrivium, together with other works on the same topic, in particular the writings of Jordanus Nemorarius in the science of weights.⁷⁶ In addition, at least one version of Thābit's work was known in Latin learning as a writing of *scientia de ponderibus*. This version is the *Excerptum de libro Thebit de ponderibus*, a Latin text which appears frequently in the codexes. It is precisely a digest of the logical structure of *Liber de karastonis*, in the shape of statements of all the theorems.⁷⁷

NOTES

¹ My work on Arabic mechanics began in the context of an interdisciplinary project on the history of mechanical thinking sponsored, between 1996 and 2003, by the Max Planck Institute for the History of Science in Berlin. Different aspects of the research on the Arabic science of weights, by the author, are exposed in his other publications: see the references below in the bibliography section; a large array of resources on Arabic mechanics are available in Abattouy 2007d, section 5, pp. 131-149.

² This balance is described in al-Ṣabāḥ 1989, p. 32 and in Vaudour 1996, p. 88.

³ It is described in Skinner 1967, p. 87 and in Knorr 1982, p. 118, plate 11.

⁴ Al-Khāzinī 1940, pp. 3-4.

⁵ Dozy 1927, vol. 2, p. 327.

⁶ On the ancient history of the steelyard, see Ibel 1908 and Damerow *et al.* 2002.

⁷ Tunis, National Library, MS 8297, folios 57b-58b. For a commentary on this Maghribi balance, see Abattouy 2003a, pp. 105-109.

⁸ Al-Khāzinī 1940, pp. 78-79.

⁹ Ibid, pp. 83-86.

¹⁰ Al-Jawbarī 1979-80, vol. 2, p. 162.

¹¹ A preliminary study of the interaction of the *ḥisba* institution with the science of weights may be found in Abattouy 2002b, pp. 124-126; 2004b; 2007b, pp. 72-75.

¹² See the reports of the Max Planck Institute for the History of Science in Berlin: *Research Report 1996-1997*, Department I (Director: Jürgen Renn), Project 1: The Relation of Practical Experience and Conceptual Structures in the Emergence of Science – Mental Models in the History of Mechanics 34 (URL: http://www.mpiwg-berlin.mpg.de/resrep9697/report_96_97.3.html#pgfId=1025748); and *Research Report 2000-2001, The transformation of science in the Middle Ages* (URL: http://www.mpiwg-berlin.mpg.de/en/resrep00_01/Jahresbericht_2_2_section.html).

¹³ Al-Khāzinī 1940, pp. 99-100. The text of the *Nutaf* was edited and

translated, with commentaries, in Abattouy 2001a.

¹⁴ The discussion of the balance equilibrium problem in *Kitāb mīzān al-ḥikma* by al-Khāzinī is analysed in Abattouy 2001, pp. 188–195. For a larger study of the history of this problem in Greek, Arabic and pre-modern mechanics, see Renn and Damrow 2012.

¹⁵ The contents of these two works are surveyed in Abattouy 2001b, p. 216 ff. On the textual tradition of *Maqāla fī 'l-mīzān*, see Abattouy 2004c and 2007a.

¹⁶ Bulmer-Thomas 1971, p. 431.

¹⁷ Edited by Woepcke in 1851 on the basis of Paris MS 2457, folios 21b–22b and translated into English in Clagett 1959, pp. 24–28. See the study of this treatise in Abattouy 2004c and Abattouy 2007a.

¹⁸ In Ibn al-Nadīm (1871–72, vol. 1, p. 266) and Ibn al-Qiftī (1903, p. 65), the *Book on Heaviness and Lightness* is quoted among the genuine works of Euclid, but they do not make any mention of Thābit's *isḥāḥ* of its Arabic version. Nevertheless, Thābit ibn Qurra's edition of the text is documented from the very titles of the three extant manuscript copies of the Pseudo-Euclidean short tract.

¹⁹ There are no significant differences between the three manuscripts, and it seems that they stem from the same original. A fourth source is the abridged version edited by al-Khāzinī and consisting of statements of the axioms and theorems without proofs: al-Khāzinī 1940, pp. 21–22.

²⁰ Curtze (1900) edited these two Latin versions. On the basis of his controlling of the order of the letters in their diagrams, he concluded that one was translated directly from Greek and the other from Arabic. The Latin text was edited and translated into English in Moody and Clagett 1952, pp. 26–31.

²¹ The Archimedian tract was integrated by al-Khāzinī in his *Kitāb mīzān al-ḥikma* (al-Khāzinī 1940, Book I–chap. 2, pp. 20–21).

²² Clagett 1959, pp. 52–55; Clagett translated the Arabic text transcribed by Zotenberg and relied on what Wiedemann indicated of Gotha manuscript.

²³ Heron's *Mechanics* was edited and translated twice respectively by Carra de Vaux in 1893, with French translation, and by Schmidt and Nix in 1900, with German translation. These editions were reprinted recently: by Herons 1976 and by Héron 1988.

¹⁴ The Arabic text of Pappus' *Mechanics* was transcribed and translated into English in Jackson 1970.

¹⁵ See the German translation of this text in Wurschmidt 1925. This text was probably the source from which al-Khāzinī extracted the few statements on heaviness and lightness he ascribed to Menelaus and which he edited in the First Book of his *Balance of Wisdom*, after those of Euclid and Archimedes. Entitled *Fī ru'ūs masā'il Mānālaus fī 'l-thiql wa 'l-khiffa* (On the main theorems of Menelaus on heaviness and lightness), it consists of six postulates on hydrostatical problems: Al-Khāzinī 1940, pp. 22-23.

¹⁶ Al-Khāzinī 1940, pp. 78-79.

¹⁷ Heinen 1979a, Heinen 1979b and Heinen 1983.

¹⁸ The Latin text is edited with English translation in Moody and Clagett 1952, pp. 88-117.

¹⁹ Respectively in Jaouiche 1976 and Knorr 1982.

²⁰ The mechanical theory of *Kitāb fī 'l-qarastūn* was studied in Jaouiche 1976, Abattouy 2000d, Abattouy 2001b and Abattouy 2002a.

²¹ This text was preserved thanks to its integration in *Kitāb mīzān al-ḥikma*: al-Khāzinī 1940, pp. 33-38. For translations, see the German version in Wiedemann 1970, vol. 1, pp. 495-500 and a partial English version in Knorr 1982, pp. 206-208.

²² The *Ziyyāda* text was translated into German in Wiedemann (1911-12, pp. 35-39), and the Arabic text was edited and translated into English recently in Knorr (1982, pp. 138-167). Knorr considered it to be an Arabic version of the *Liber de canonio*, an anonymous treatise on the balance known only in Latin and of which we do not know either the origin or the date of redaction.

²³ On al-Ahwāzī, see Sezgin 1974, p. 312.

²⁴ Al-Khāzinī 1940, pp. 15-20.

²⁵ In his catalogue of Arabic manuscripts, Paul Sbath mentioned that there was a copy of Ibn al-Haytham's *Maqāla fī 'l-qarastūn* in a private collection in Aleppo in Syria. This *Maqāla* may be Ibn al-Haytham's treatise on centres of gravity: See Sbath 1938-1940, part 1, p. 86. For textual considerations on the treatise of al-Qūhī, see Bancel 2001.

³⁶ The correspondence was edited and translated into English in Berggren 1983 and more recently in Abgrall 2004.

³⁷ On Ilyā al-Maṭrān, see Abattouy 2005a and Graf 1947, pp. 177-191.

³⁸ According to a letter received from Gotha's Forshung –und Landsbibliothek, this manuscript was lost around 1920.

³⁹ Al-Khāzinī 1940, pp. 39-45. Al-Isfizārī's biography and the contents of his *Irshād* are surveyed in Abattouy 2000b and Abattouy 2001b.

⁴⁰ On al-Isfizārī and his works in mechanics, see Abattouy 2000b, Abattouy 2001b, Abattouy 2002a, Abattouy 2007c, Abattouy 2008c and Abattouy and Al-Hassani 2012 (soon to be published): *The Corpus of Mechanics of Al-Isfizārī: Critical Edition, English Translation and Commentary*. To be published by Al-Furqān Islamic Heritage Foundation in London.

⁴¹ On al-Khāzinī and his work, see Hall 1981, Abattouy 2000a, and Abattouy 2007c.

⁴² Reproduced in an abridged version by al-Khāzinī: see al-Khāzinī 1940, pp. 83-86.

⁴³ These texts are preserved in Aya Sofya Library in Istanbul, Codex 3711.

⁴⁴ Obviously extant in a unique manuscript discovered in Lahore in 1979 by Anton Heinen: see Heinen 1983.

⁴⁵ Both edited in al-Khāzinī 1940, pp. 87-92, 151-153. On al-Khayyām's mechanics, see Aghayani Chavoshi and Bancel 2000. Al-Khayyām's extant text on *al-Qistās al-mustaqīm* or the right balance is analysed and edited in Abattouy 2005b.

⁴⁶ On al-Umawī, see Sa'idān 1981.

⁴⁷ See on Ibn al-Sarrāj King 1987 and Charette 2003.

⁴⁸ This treatise is a digest of earlier works composed of an introduction – devoted to the principle of the equilibrium of weights – and two chapters on the construction of the steelyard, and the conversion of weights between countries. Chapter 1 deals in a didactic way with the elementary properties of the balances and a certain emphasis is made on the law of the lever. The text exists in 3 copies: Damascus, National Library, Zāhiriyya collection, MS 4297; Aleppo, al-Aḥmadiya Library,

al-Maktaba al-waqfiya, MS 1787; Rabat, National Library, MS D 1954.

⁴⁹ Among these anonymous texts, we should mention a "strange" text preserved in Paris (Bibliothèque Nationale, Fonds Arabe, MS 4946, ff. 79-82) under the title *Nukat al-qarastūn* (The secrets or properties of the steelyard) which is ascribed to Thābit ibn Qurra. Its contents are without doubt related to the science of weights, and its main subject is elementary and there are some cases of weighing with the steelyard.

⁵⁰ Al-Fārābī 1949, pp. 88-89.

⁵¹ *Ḥiyāl* (sing. *ḥīla*) translated the Greek word *mechanê* which means both mechanical instrument and trick and is at the origin of the words machine and mechanics. On the semantic affinities between *mechanê* and *ḥīla*, see Abattouy 2000c.

⁵² In the Arabic partial version of Pseudo-Aristotle's *Mechanical Problems*, this very function of the *ḥiyāl* is said to be carried out with artificial devices (*ḥiyāl šinā'iyya*): see the edition of the *Nutaf min al-ḥiyāl* in Abattouy 2001a, pp. 110, 113 and Aristotle 1952, 847a 25-30. The function of 'ilm al-ḥiyāl as actualisation of potentialities is surveyed in Saliba 1985.

⁵³ *Metaphysics* XIII.3, 1078 a 14-16.

⁵⁴ The thesis of the emergence of the Arabic science of weights was first formulated in Abattouy, Renn and Weinig, 2001.

⁵⁵ That *al-ālāt al-mutaḥarrika* refers to automata is established in Abattouy 2000c, pp. 139-140.

⁵⁶ The other components of geometry are the sciences of measurement, of optics and mirrors, and of hydraulics: see Anawati 1977, p. 330 and Ibn Sīnā 1989, p. 112.

⁵⁷ The difference is well illustrated by the definition opening Pseudo-Euclid's *Maqāla fī 'l-mīzān*: "weight (*wazn*) is the measure of heaviness (*thiq*) and lightness (*khiffa*) of one thing compared to another by means of a balance": Paris, Bibliothèque Nationale, MS 2457, f. 22b.

⁵⁸ Al-Ghazālī 1961, p. 139.

⁵⁹ Al-Ḥusayn b. Abī Bakr Ibn Rashīq (d. 1292), *Risālat fī taṣnīf al-ʿulūm al-riyāḍiyya*, Rabat, the National Library, MS Q 416, p. 422. On Ibn Rashīq, see Lamrabet 2002 and Abattouy 2003a, pp. 101-105.

⁶⁰ Al-Bayhaqī 1988, p. 125. Likewise, in the notice he devoted to the

mathematician Abū Sahl al-Qūhī, al-Bayhaqī states that he was “well-versed in the science of machines and weights and moving spheres” (*baraza fī ‘ilm al-ḥiyāl wa al-athqāl wa al-ukar al-mutaḥarrika*) (ibid., p. 88).

⁶¹ In the incipit of this collection, al-Isfizārī writes: “We collected in this book what has reached us of the books on various devices (*anwā’ al-ḥiyāl*) composed by the ancients and by those who came after them, like the book of Philon the constructor of machines (*sāhib al-ḥiyāl*), the book of Heron the mechanician (*Irun al-majānīqī*) on the machines (*ḥiyāl*) by which heavy loads are lifted by a small force... We start by presenting the drawings of the machines (*ṣuwwar al-ḥiyāl*) conceived by the brothers Muḥammad, Aḥmad and al-Ḥasan, Banū Mūsā ibn Shākir.” Manchester, John Ryland Library, Codex 351, f. 94b; Hyderabad, Andra Pradesh Library, Asafiyya Collection, Codex QO 620, p. 1.

⁶² In his *Kitāb at-turuq al-saniyya fī al-ālāt al-rūḥāniya* (The Sublime methods in spiritual machines): al-Ḥasan 1976, p. 24.

⁶³ Berggren 1983, pp. 48, 120.

⁶⁴ Al-Khāzinī 1940, p. 5.

⁶⁵ For instance, Ibn al-Akfānī (14th century) asserts that ‘ilm *marākiz al-athqāl* shows “how to balance great weights by small ones, with the intermediary of the distance, such as in the steelyard (*qarastūn*)”: Ibn al-Akfānī 1989, p. 409. The same idea is in al-Tahānawī 1980, vol. 1, p. 47.

⁶⁶ Philon’s *Pneumatics* was translated into Arabic under the title *Kitāb Filūn fī al-ḥiyāl al-rūḥāniya wa mājanīq al-mā’* (The Book of Philon on spiritual machines and the hydraulic machines). The Arabic text was edited and translated into French in Carra de Vaux: see Philon 1902.

⁶⁷ A Persian text called *Mi’yār al-‘uqūl dur fan jar athqāl* is attributed to Ibn Sīnā. The treatise, in two sections, is devoted to the five simple machines. It presents the first successful and complete attempt to classify simple machines and their combinations: Rozhanskaya 1996, pp. 633-34.

⁶⁸ Al-Isfizārī is the author of a collection of summaries and commentaries extracted from the mechanical works of Heron, Philon, Apollonius, and Banū Mūsā. He dealt with simple machines in his

commentary on Book II of Heron's *Mechanics*: see supra, n. 61, and Abattouy 2000b, pp. 147-48. Al-Isfizārī's corpus of mechanics is being analysed, edited and translated in Abattouy and Al-Hassani 2013.

⁶⁹ Sinān (d. 942), the son of Thābit ibn Qurra, is the author of a fragment on the five simple machines preserved in Berlin, Staatsbibliothek, MS Orient fol. 3306. This fragment by Sinān b. Thābit was published and analysed in Abattouy 2011.

⁷⁰ For the two works of Banū Mūsā and al-Jazarī, see respectively Hill 1974 and Hill 1979 for English translations, and al-Hasan 1979 and al-Hasan 1981 for the Arabic texts.

⁷¹ Al-Khwārizmī 1968, pp. 246-247.

⁷² It is evident that all these issues need to be treated and instantiated separately and thoroughly, as they document the theoretical components of the new science of weight: see for a first analysis Abattouy 2001b and Abattouy 2002a. The interpretation of the Arabic science of weights as a progress in science is developed in Abattouy 2004a.

⁷³ Gundissalinus 1903, *De Div. Phil.*, pp. 121-24 and Gundissalinus 1932, *De Scientiis*, pp. 108-112.

⁷⁴ It is to be noted that Hughes de Saint Victor who, in his *Didascalicon de studio legendi*, provided the most complete Latin classification of the sciences before the introduction of Arabic learning, just overlooked the two mechanical arts. On the *Didascalicon*, see Taylor 1991.

⁷⁵ This was noted by Hugonnard-Roche 1984, p. 48. Other Arabic works on the classification of the sciences translated into Latin might have been a source for the distinction of the science of weights and its qualification as the theoretical basis of mechanics. For instance, al-Ghazālī's *Maqāṣid al-falāsifa*, translated as *Summa theoriae philosophiae* by Gundissalinus and Johannes Hispanus in Toledo, and Ibn Sīnā's *Risāla fī aqsām al-ṭulūm*, translated by Andrea Alpago: *In Avicennae philosophi praeclarissimi ac medicorum principis, Compendium de anima, De mahad..., Aphorismi de anima, De diffinitionibus et quæsitis, De divisione scientiarum*, Venice, 1546, fols 139v-145v.

⁷⁶ The *Liber karastonis* is edited with English translation in Moody and Clagett 1952, pp. 88-117. For more details on its codicological tradition, see Buchner 1922 and Brown 1967.

⁷⁷ Brown, 1967, pp. 24-30 and Knorr, 1982, pp. 42-46, 173-80.

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Zumthor in Zābul: Western Editorial Theory and the Shāhnāma

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IN HIS CONTRIBUTION to David Greetham's *Scholarly Editing, A Guide to Research*, published in 1995, Michael G. Carter who contributed the essay on editing of Arabic literature to the collection, makes several problematical observations. Some of these are:

The history of editing in Arabic is indirectly covered in the history either of scholarship or of printing ... While it might be objected that printing and editing are only distantly related, it is a fact that Arabic, like other exotics, could not have been published in the West at all without the creation of special type fonts; hence book production and editing necessarily go hand in hand. ... It is appropriate to observe that *conventional editing on Western lines has nonetheless been energetically and sometimes brilliantly carried out in Arab and Muslim countries ever since the introduction of printing in the Arab world, in the nineteenth century* [my emphasis].¹

This view of classical Muslim editorial scholarship, although prevalent, is simply misleading. The incomparable influence of the Qur'an and the prophetic tradition in Islam helped focus the energy and attention of Muslim scholars on *texts* and the accuracy of their transmission from very early on. Accounts of Muslim scholars' efforts and theoretical contributions to textual scholarship are scattered throughout the surviving historical and literary texts. Of course, it is true that a systematic history of Muslim contribution to textual scholarship remains

unwritten; however, glimpses of this long and respectable tradition may be had in the writings of a number of contemporary authorities.² Those who distort the words of the holy writ are mentioned in the Qur'an (2:75, 4:46). The great theologian, Ibn Hanbal (164-241/780-855) reports traditions according to which the accuracy of the text of the scripture was checked during the lifetime of the Prophet (*al-Musnad*, no. 2449, 3001). Regardless of one's doctrinal beliefs, one must admit that concern for textual accuracy may be dated to the time of the Prophet and shortly thereafter. Later, in the 2nd/8th century, al-Jāhiz speaks about the difficulty of making critical editions: *maṣaqqatu tashīh al-kutub*, and the need for producing critical editions of texts: *wujūb al-'ināya bi-tanqīh al-mi'allafāt*.³ In the 3rd and 4th century *hijrī*, in a section on collation, al-Rāmhurmuzī (c. 260-360/874-971) quotes Hišām ibn 'Urwa (d. 146/764) to have said that upon completing the copying of a document, his father asked him, "Did you finish writing?" He responds "Yes." Then, his father asks, "Did you check what you wrote against the original?" When he answers in the negative, his father says: "Then you did not really finish it. Then you did not write my boy."⁴

Aside from scattered information about textual scholarship, we know about a number of classical Muslim authors who wrote works that were entirely devoted to the intricacies of textual editing. Ibn Qutayba (d. 276/889) had written a book entitled, *Tashīf al-'Ulamā'*, which has, unfortunately, been lost. After him, Abūbakr al-Sūlī (d. 335/946) and many others composed books and treatises on the subject. One of the most systematic of these is *al-Tanbīh 'Alā Hudūth al-Tashīf*, by the famous Hamza ibn al-Hasan al-Isbahānī (d. 360/971). Fortunately, copies of this text have survived and a new edition of it, together with a Persian and English translation, is underway in Iran.

In spite of all this, western histories of editing make no mention of the contributions of Muslim scholars to the art of editing. They typically begin with an account of the editorial activities of the Greek scholars of antiquity, take a detour through medieval scriptoria and the efforts of the Renaissance scholars, and end up with the work of the modern European editors. The Eurocentrism of these histories is, of course, understandable because most of them are concerned with the development of the discipline in the West. What is hardly understandable is the

tendency of some scholars of Arabic and Persian to confuse the cultures of classical Islam with that of medieval Europe and to try to apply editorial techniques that work for medieval European literatures to classical Arabic or Persian texts.

The almost willful disregard of the contributions of classical Muslim sources to textual scholarship is compounded by a propensity to understand and interpret the cultural history of classical Islam, including its textual scholarship, in European terms. Arab and Persian poets and authors are called "medieval" and their works are interpreted as though they were medieval European works. Thus, editorial techniques that may be suitable for editing medieval European texts are advertised as equally suitable for editing classical Persian and Arabic literary monuments. I will provide a specific example of what I mean, by considering a relatively recent suggestion that Iran's national epic, the *Shāhnāma* should be edited using the same techniques employed in editing medieval European epics. But before doing that, let me briefly explain why classical Persian literature cannot be considered "medieval."

Following the fall of the Roman Empire in the 5th century CE to barbarian invaders, Western Europe entered a period of its history, which is commonly called "the Middle Ages" in English. This invasion marked a momentous occasion in the history of Western Europe, and the social and cultural circumstances that resulted from it exerted a significant influence upon the course of Europe's development. The medieval period of European history is generally understood to be a period of intellectual depression stretching from "the establishment of the barbarian supremacy in the fifth century" to the revival of learning in the Renaissance.⁵ Petrarch (1304-1374 CE) and other Renaissance humanists believed that the human culture that had reached its zenith in the civilisations of Greece and Rome, collapsed "with the onset of Christianity and barbarism, and had only revived in their own time."⁶ The European Middle Ages brought Rome's beautiful and great urban centres, her government, courts of law, schools, libraries, infrastructure, and much of what marked her civilisation to a virtual standstill. The reasons for all this need not detain us here. What is important for our purposes is that generally speaking, the medieval period in European history coincided with the onset of the long autumn of that continent's

cultural life; an autumn that lasted nearly a thousand years. During most of this period, literary civilization barely existed. Literacy continued only in a few ecclesiastical centres such as Benedictine monasteries. Most of Western Europe was cut off from the thriving intellectual and economic life of the Eastern Mediterranean that followed the expansion of Islam in the seventh century.⁷ This was especially the case in the early part of the Middle Ages (475-1000 CE), which is dubbed the Dark Ages, and is often described as "a time of despair [and of] disintegration of the Mediterranean world and the collapse of [Europe's] political, cultural, and economic unity."⁸ This period was also marked by a sharp decline in Latin literature, and near complete absence of national literatures. This is why the Renaissance humanists understood the terms "Middle Ages" or "Dark Ages" to refer to that period of European history marked by a general decline of arts, sciences, and political institutions in Western Europe.

The Middle East did not experience this kind of dreadful barbarisation. In other words, the Muslim world did not have a "medieval" phase or a "Dark Ages" of its own during these same centuries. The tripartite division of European history into the *classical*, the *medieval*, and the *modern* periods is *exclusively* applicable to Western Europe. As the great American medievalist Joseph Reese Strayer (1904-1987) pointed out, the medieval civilisation is "a civilisation which, in its complete form, covers *only Western Europe* [my italics]. It has little influence on Eastern Europe and even less on Western Asia and Northern Africa."⁹ Strayer's view is reiterated by W. F. H. Nicolaisen, who writes:

The notion of a chronological Middle Age, with its concomitant epithet medieval, is, in its hint at a tripartite temporal division, essentially European in origin and application. Any exercise insisting on a double vision in matters concerning oral tradition in a medieval setting ..., is consequently almost by definition, predestined to concentrate on and perhaps even to deal exclusively with, the European scene.¹⁰

In contrast to Western Europe whose civilisation had collapsed into the Dark Ages following the barbarian invasions, the Iranian civilisation, at about the same time, had entered its golden age and was well on its way to reach its most productive phase. Western Europe and the

Muslim Middle East therefore, experienced opposite outcomes following the invasions that radically changed their social and cultural circumstances. The barbarian invasions ravaged the Roman civilisation of Western Europe, while the Muslim invasion unleashed intellectual forces that laid dormant in the ancient domain of the Sassanid Empire. These radically different invasions produced two drastically different cultures. At almost exactly the same time as Western Europe was experiencing her Dark Ages, the civilisations of the Middle East, including the Iranian civilisation, were undergoing a revolution in science, technology, and the arts largely *as a result* of the Muslim invasion. Therefore, inferences drawn from lives or habits of medieval European authors may not be used to deduce anything about the lives or habits of classical Muslim litterateurs. The assumption that any classical Arabic or Persian work of literature may be considered a "medieval" work simply because its author's lifetime coincided with the period that is called the "Middle Ages" in Western historiography is flawed. Naturally, no editorial techniques that are devised for dealing with peculiarities of medieval European literatures may necessarily be applicable to classical Persian and Arabic texts of the classical period.

Keeping this important distinction in mind, let us consider a recent suggestion that the text of Ferdowsi's *Shāhnāma* (completed c. 1010 CE), may benefit from editorial techniques that were developed for medieval French epics.

It has recently been suggested that the manuscript tradition of Iran's national epic, the *Shāhnāma*, may justifiably be subjected to editorial approaches that have proven efficacious in editing Middle French epics and romances. One student of the *Shāhnāma* writes:

The manuscripts of the poem vary enormously, especially in its most famous passages. The situation is much more like that of, say, the corpus of medieval French narrative poems than it is like that of the Homeric text. An obvious way forward would be to accept that the poem is irreducibly multitextual.¹¹

Those who are familiar with the history of editorial theory in the West also understand that this statement contains an allusion to the work of Paul Zumthor and the *mouvance* movement in editing, a theory that we will examine in greater detail below. Similar views were

expressed a few years earlier by another scholar:

The concept of *mouvance*, [...] was formulated by the medievalist Paul Zumthor. According to this formulation, medieval texts that derive from oral traditions are not a finished product, *un achèvement*, but a text in progress, *un texte en train de se faire*. No matter how many times a text derived from oral traditions, is written down, it will change or *move*: hence the term *mouvance*. Following both Zumthor and Pickens, Gregory Nagy has applied the concept of *mouvance* to the history of the Greek Homeric text: both the papyrus fragments (from the Hellenistic and Roman periods) and the medieval manuscripts of the Homeric *Iliad* and *Odyssey* preserve a number of variant readings that are demonstrably authentic from the standpoint of the formulaic system that generates Homeric diction. In any given case, where two or more authenticated variant readings are attested, Nagy argues that the editor's task is to establish which variant was used at which historical point in the evolution of the text, not to guess which is "superior" and which is "inferior".¹³

Before evaluating the relevance of these observations, let us briefly discuss Zumthor and place the concept of *mouvance* in its proper intellectual and historical contexts. Lacking linguistic competence in any of the medieval European languages and unable to directly consult the relevant medieval European manuscripts, I have liberally drawn on the published works of numerous Western medievalists in order to support my arguments.¹³

In order to understand what the term *mouvance* implies and how it has come to influence discussions of editorial theory in the West, we must start with classical editing. The British poet and classicist, Alfred E. Housman (1859-1936), defined textual criticism as "the science of discovering error in texts and the art of removing it."¹⁴ This definition best suits those literary works that have specific authors, because it presumes the existence of a fixed text that mirrored its author's intentions behind all of the different surviving manuscripts of that author's work. It also assumes that the more this fixed text is copied, the more errors enter into it, and the more errors enter the text, the farther it moves from what its author originally composed and intended to circulate. Therefore, the task of the editor is to reverse the process of corruption

that has afflicted the text in order to restore it to its original undefined state.¹⁵ This is generally true for the bulk of Europe's classical texts, especially its Greek and Latin literary monuments. Before the rise of the European vernacular literatures, since medieval Europe's textual output was composed in Latin, it could also be edited by using the same techniques that were used for editing pre-invasion classical texts. The rise of vernacular literatures in medieval Europe, however, changed the situation drastically.

Different forms of native *written* European literatures in languages other than Latin began to appear roughly around the 11th and 12th centuries CE.¹⁶ The texts of this new literary corpus were not fixed. They were heavily influenced by oral tradition and in fact existed somewhere between orality and textuality. A typical medieval vernacular work is a product of an interaction between orality and textuality; between written verse for readers and narrative song for singers. Carol Braun Pasternack has cleverly referred to them by using the term "inscribed texts"¹⁷ because of their strong oral characteristics in order to distinguish them from standard literary traditions. Unlike the Latin texts of the earlier times, medieval vernacular works did not have stable texts and changed with every reproduction in a different way. As such, they do not easily yield to the editorial techniques that were developed for correcting Latin texts.

The mutability of the texts of medieval vernacular literature presents their editors with a number of dilemmas. One must ask oneself which version of a given text is the "correct" version and who really authored it. Since these texts were rooted in a usually sung oral tradition, and since each singer changed the song in each performance just as each copyist allowed his memory for the song to interfere with the wording of the text that he copied, does it even make sense to ask who the author was? The notions of the "author" and the "authorial text," which implies the idea of a fixed text, were irrelevant for much of medieval Europe's vernacular literature. Michel Foucault questioned the application of the idea of authorship to these texts in a lecture that he delivered for the *Société française de Philosophie* in 1969. He argued that medieval European vernacular material required a different way of considering the idea of "authorship:"

The author's function is not universal or constant in all discourses. Even within our civilisation, the same types of texts have not always required authors; there was a time when those texts which we now call "literary" (stories, folk tales, epics, and tragedies) were accepted, circulated, and valorised without any question about the identity of their author.¹⁸

One might even suggest that the idea of the "author" dwindled with the decline of classical literature after the barbarian invasions, and remained largely dormant in Western Europe until its gradual revival around the time of the Renaissance. Chaucer's address to his own work at the end of the *Troilus and Criseyde* is often cited as one of the earliest instances of the resurgence of the idea of authorial proprietorship:

*Go, Litel book, go, litel myn tragedye,
Ther god thi makere yit, or that he dye,
So sende might to make in some comedye!
But, litel book, no making thow nenvie,
But subjit be to alle poesie;
And kis the steppes, where as thow seest space
Virgile, Ovide, Omer, Lucan, and Stace.¹⁹*

*Go little book, go little tragedy,
Where God may send thy maker, ere he die,
The power to make a work of comedy;
But, little book, it's not for thee to vie
With others, but be subject, as am I,
To poesy itself, and kiss the gracious
Footsteps of Homer, Virgil, Ovid, Statius.²⁰*

Chaucer's proprietary feelings are also implied in his admonition to his scribe, Adam, extant in only one manuscript (Cambridge Trinity College MS R. 3. 20), where he curses Adam if he does not improve the accuracy of his copying:

*Adam scriveyn, if evere it thee befalle
Boece or Troilus ofr to wryten newe,
Under thy long lokkes thou most have the scale,
But after my making thow wryte more trewe;*

So ofte adaye I mot thy werk renewe,
 It to correcte and eke to rubbe and scrape,
 And al is thorough thy negligence and rape.¹¹

Adam my scribe, if you it should ever happen
 that you write Boece or Troilus anew,
 may you have scabs and scales under your locks,
 unless you copy in true fashion in accord with my lines.
 So often I must renew your work,
 and correct and rub and scrape;
 And all is through your negligence and haste.¹²

Prior to the 14th century, authorial claims of possession and control were quite uncommon. The idea of authorial ownership of the text was not revived before the late 17th century, when the British House of Lords ruled on the case of *Donaldson v. Becket*, and formally addressed the question of literary property in Europe.¹³ But if the idea of authorship was not well developed, who created the medieval vernacular works that have survived?

Following the widespread appearance of vernacular European literature sometime after the 11th century, this literature existed as the by-product of the collective creative activities of singers, performers, and scribes, *not* as the fruit of the creativity of a specific person. As such, it was the intellectual property of no one. Carol Braun Pasternack's work with Old English poetry clearly explains the situation.

Pasternack argues that modern readers are misled by the format in which Old English verse is presented to them in printed editions. Today, Old English poems appear pristinely in pages of Scholarly tomes that are laid out in a formalised configuration. They are given titles and are laid out in numbered lines that are visually divided into sentences and verse-paragraphs, with clear beginnings, middles, and ends.¹⁴ But in manuscript form, Old English poems do not have titles, and are often deficient from the beginning, middle or end:

Old English verse was inscribed to be read aloud ... [It] was considerably more dependent on the ear than on the eye. In printed poetry, especially free verse, we rely on the eye more than on the sounds of the words to scan

rhythms and structures: indeed, the voice follows the eye, which watches for capitals, line divisions and punctuation. In the manuscripts of Old English verse, however, words fill the page from left to right margin, and the reader must hear the alliterative and stress patterns to sense the verse units and the syntactic rhythms to sense the clauses and periods. This method of layout requires that the reader be familiar with aural patterns and be prepared to interpret the structures of the texts.²⁵

A similar situation exists in Old French literary texts. According to Paul Zumthor, these texts "were destined to be sung" with the rhythmic and melodic factors influencing "the textual functioning."²⁶ It was precisely because of the important role of oral factors such as cadence, melody, etc., upon the reading of these texts, that they did not have to be laid out on the page visually. Their readers "heard" them as they read them. Therefore not only layout, but also punctuation marks, in the sense that we understand and depend on them today, were not necessary, and are in fact quite rare in actual manuscripts of Old English verse. These manuscripts, like many others in vernacular tongues, are copied as blocks of texts often in an uninterrupted chain of letters that is called *scriptio continua*. According to Katherine O'Brien O'Keeffe, to the extent that Old English texts were "inscribed texts," they did not need punctuation because, "early readers of Old English verse read by applying oral techniques for the reception of a message to the decoding of a written text."²⁷ They knew when to pause and when to move on because of their familiarity with the way Old English verse was sung in the oral tradition. As a result:

Inscribed texts function without authors: the poet, oral or stylus-in-hand, has left the scene, a scribe has intervened, and the language of the texts conveys the imprint of tradition rather than of an author. A significant, if ironic aspect of these "traditional" rather than "authored" texts is their openness to new constructions of texts by subsequent poets, performers or scribes, and to varied constructions of meaning by readers. This openness derives in part from the way in which the texts couple features of the oral and the written.²⁸

Given the cultural context of the vernacular literature of medieval

Europe therefore, the readers, the performers, and the scribes of these texts heard them in their heads, and interfered with them as they read, performed, or copied them. Naturally, these features of medieval European vernacular texts, profoundly influenced the way they were produced. It is true that like every other text, manuscripts of medieval European poems were copied by scribes. However, because the medieval scribe was a product of an oral culture, he "reproduced" his exemplar differently from the way Muslim scribes copied their texts. Using his familiarity with the system of oral formulas on which he had cut his teeth, the European scribe did not passively copy. He also improvised while copying.²⁹ Therefore, medieval European poems did not have a "fixed" text, because each scribe was at the same time the author of his own redaction or scribal version of what he copied.³⁰ As a result, medieval European poetic texts lack fixity and are inherently variable. To the extent that these texts survive in specific written manuscripts, they belong to the literary tradition. However, to the extent that their layout, their enormous variability, and the cultural circumstances under which they were produced, were deeply influenced by orality, they are "oral" texts. This dual characteristic of the vernacular literature of medieval Europe has led some scholars to place medieval verse somewhere between fully oral and fully written. Alger N. Doane, for example, writes of Old English:

That [Old English poetry] is writing at all is accidental, extrinsic to its main existence in ongoing oral traditions; hence it was never intended to feed into a lineage of writing.³¹

One must therefore conclude that the vernacular literature of medieval Europe was a group product, created by different people who contributed to its creation during the processes of copying, performance, or recitation. As texts they were inherently variable, because there was neither an author nor a fixed form to anchor them. Therefore, it is reasonable to observe that their scribes participated in transmitting these poems, and that these texts may be considered products of a collaborative effort among their "authors" and their scribes – who "drawing on their familiarity with the techniques of formulaic composi-

tion" recomposed them during copying.³² They were further interfered with during performance by those who read or sang them aloud for others. In other words, the collaborative aspect of this poetry's transmission, in which the scribe, the author, and the performer/reader, were joined together, renders the notions of "authorial intention," and "the fixed text" irrelevant.³³ For this reason, students of medieval European literatures may justifiably assess the variants that they find in their manuscripts differently from the way the editors of literary texts assess their variants.

Those familiar with reproduction of texts in classical Iran know that none of the European conditions applied. Once a classical Persian text was composed by its specific and often well-known author, it was done. From that point on, copying only moved it away from its definitive form, much as classical Latin texts were moved away from their archetypal form by repeated copying. Therefore, claims that the text of the *Shāhnāma* resembles medieval French texts in any way are baseless. But for now, let us stay with the fluidity of vernacular texts in medieval Europe and consider the implication of textual instability in Old French literature in order to understand better the term *mouvance*.

French medievalists used the term *mouvance* to refer to the textual variability encountered in their manuscripts. The scholar most closely associated with the popularisation and promotion of this concept was the Swiss medievalist, Paul Zumthor (1915-1995), who taught at the universities of Amsterdam and Paris until 1972, and later moved to the University of Montreal where he taught until his retirement in 1980. Zumthor's most important contribution to medieval studies may be his *Essai de poétique médiévale* from 1972, which was subsequently translated into English and was published in the United States.³⁴

In medieval French studies, the term *mouvance* denotes "the propensity for change characteristic of any medieval work."³⁵ In 1955 Rychner had already used the word *mouvant* in order to "describe the instability of oral epic texts subjected to continual improvisation by performer-composers."³⁶ Later, Martin de Riquer,³⁷ and Rychner came back to the idea. Rychner revived the archaic word *muance*, which in Old French meant "change, variation," and applied it to those textual varieties that renew, and at the same time corrupt medieval poems.³⁸ Mary Blakely

Speer points out that none of these scholars formulated the idea of change inherent in medieval French verse transmission into a theory, and although a number of scholarly manuscript editions that took the implication of this idea into consideration were published, none recommended the establishment of new editorial procedures or guidelines based on the concept of *mouvance*.³⁹ The task of formulating *mouvance* as a theoretical concept with implications for textual criticism was left to Zumthor, who tackled the question in a number of influential works. Zumthor defined *mouvance* as:

That character of a work which – to the extent that we can consider something to be a work before the era of the printed book – results from a quasi-abstraction, insofar as those concrete texts which constitute the work's real existence present through the play of variants and re-workings something like a ceaseless vibration and a fundamental instability.⁴⁰

He argued that “the notion of textual authenticity, as understood by philologists, seems to have been unknown” in vernacular texts that were composed before the end of the fifteenth century.⁴¹ He also pointed out that for these texts:

The term *work* cannot ... be understood in its modern sense. It refers, however, to something that undoubtedly had real existence, as a complex but easily recognizable entity, made up of the sum of material witnesses to current versions. These were the synthesis of signs used by successive “authors” (singers, reciters, scribes) and of the text's own existence in the letter. The form-meaning nexus thus generated, is thereby constantly in question. The work is fundamentally unstable. Properly speaking it has no end; it merely accepts to come to an end, at a given point, for whatever reasons. The work exists outside and hierarchically above its textual manifestations ... It will be understood that I do not mean by this to indicate the archetype of a chronological stemma. We are dealing with something existing on a different plane. Thus, conceiving the work is dynamic by definition. It grows, changes, and decays. The multiplicity and diversity of texts that bear witness to it are like special effects within the system. What we see in each of the written utterances to which the poetry can be reduced by analysis is less something complete in itself than the text still in the process of creation; not an essence, but something coming into being; rather a constantly renewed attempt to get

at meaning than a meaning finally fixed; not a structure, but a phase in the structuring process.⁴³

In the vernacular literature of medieval Europe, therefore, we encounter Pasternack's "inscribed texts" rather than the kind of texts that most classical editors are accustomed to.

This has far-reaching and important implications for editing medieval European poetry. Medieval texts' essential "variability," and the belief that one "variant" is in some sense no less "authentic" than another, has led some editors of medieval French to transmit several different versions of the works. The texts of these works are set side-by-side in order to give a better sense of the variability affecting that work's manuscript tradition. These editions, called "multitext editions," are considered, by some, to be preferable to standard editions. After all, the absence of an acknowledged "author" for most medieval French texts makes reconstructing "his/her" exact words pointless and ahistorical.

Regardless of this theory's merits, the relatively small size of most medieval texts makes producing multitext editions of them feasible. For instance, the oldest and longest of the manuscripts of *La vie de Sainte Marie l'Egyptienne*, its (version T) in Dembowski's fine edition, has only 1532 verses.⁴³ The limited size of troubadourish productions is typical of other Romance languages. The early Spanish poems, the *Poema de Fernán González*, the *Mocedades de Rodrigo*, and the *Cantar de Mio Cid* are 2,990; and 1,164; and 3,730 verses long respectively.⁴⁴ For the *Shāhnāma* with its nearly 50,000 distichs (i.e., 100,000 lines of verse), such an edition would not be practical.

As this admittedly brief summary shows, the entire concept of *mouvance* hangs on the assumption of an orally influenced process of textual transmission.⁴⁵ In other words, a living poetic oral tradition that can actually influence the behaviour of those who read and copy texts must exist before *mouvance* can come into play. This oral context was completely absent in the Iran of Ferdowsi's time. There was no tradition of "sung" or "performative" epics in Persian language that could influence the work of the Iranian scribes. I must digress here to remind the reader that although much has been made of the so-called Parthian singers, called *gōsān*, the word has never been mentioned in the *Shāhnāma* in

spite of the fact that it is metrically equivalent with the word *dihqān*, which is mentioned as Ferdowsi's source thousands of times. Moreover, in contrast to the medieval European conditions, the ideas of the "author" as well as "authorial proprietorship" were quite developed in the classical Middle East. Finally, the layout of classical Persian poetic texts was quintessentially visual rather than "aural." A discussion of text layout in classical Persian and Arabic manuscripts would take us far afield. Suffice to say that prose and poetry are clearly distinguishable in the overwhelming majority of these manuscripts.

Variant spelling and dialect diversity were two additional factors that contributed to the textual instability of medieval European texts. Standardisation of English spelling is a relatively recent phenomenon. Students of Middle English (that is, the form of English, which came into use from the beginning of the 12th to the middle of the 15th centuries CE),⁴⁶ find the instability of Middle English spelling quite annoying especially when they find out that a given Middle English word may be spelled differently throughout the same text, even in manuscripts that are copied by the same scribe.⁴⁷ The effects of instable spelling upon textual transmission, is further complicated by the influence of dialect variations in Middle English. Margaret M. Roseborough lists the following dialect variation for the simple sentence, "I will say" in the 14th century: *I wil sai* (Northern), *I wil seyn* (East Midland), *I wol saie* (West Midland), *ich wule sigge* (South Western), *ich wyle zigge* (Kentish).⁴⁸ Chaucer was troubled by the deleterious effects of these factors, and complained at the end of his *Trouilus and Criseyde*:

*And for there is so gret diversite
In Englissh, and in writing of oure tonge,
So prey I god that non miswrite the,
Ne the mysmetre for defaute of tonge.
And red wherso thow be, or elles songe,
That thow be understonde, god I biseche.—
But, yit to purpose of my rather speche.*⁴⁹

And since there is such great diversity
In English, and our writing is so young,
I pray to God that none may mangle thee,

Or wrench thy metre by default of tongue;
 And wheresoever thou be read, or sung,
 I beg of God that thou be understood!
 And now to close my story as I should.¹⁰

In contrast to the medieval European situation, the overwhelming majority of words in Persian and Arabic have been spelled the same for a thousand years. Moreover, at the time when Chaucer was complaining about spelling variability and dialectic diversity in English, spelling of Persian was fully standardized, and was, in fact, about four hundred years old. The relative conservatism of Persian language and spelling has continued to the present day, when most Persians who have received a decent high school education can easily read classical Persian texts that were composed a thousand years ago.

Classical Persian and Arabic texts were copied and transmitted under drastically different cultural circumstances than those that governed the production and transmission of vernacular medieval European literatures. Those who argue that the conditions under which European scribes and authors worked, have anything to do with the circumstances of classical Islam, fail to take cultural and historical evidence into account. In his "Comments on H. R. Jauss's Article," Paul Zumthor criticizes what he calls "blind modernism,"¹¹ which he defines as an "unthinking imposition of modern principles of literature on medieval writings."¹² Drawing upon his insight, we might hypothesize that those who unthinkingly impose medieval European principles of textual transmission and authorship upon classical Islam are suffering from "blind medievalism." Assuming Western culture to be the norm, they blindly impose their Eurocentric notions upon an alien tradition with total disregard for the vast chasm of culture and practice that separated medieval Europe from classical Islam.

The fact that almost all the works of medieval European vernacular literature lack a singular "author" in the sense that that word is commonly understood, justifies the application of certain editorial techniques implied by the *mouvance* theory. Medieval European texts did not flow from the minds of specific authors. Rather, they were products of an often sung oral tradition that hovered somewhere between oral and written expression. In the words of Zumthor:

Well into the fourteenth century a very large number of surviving texts are anonymous in the current state of our knowledge, and will remain so, because of the way they have been transmitted to us. Even when a name appears, whether as "signature" or by scribal tradition, we are usually dealing with very common first names, like Pierre, Raoul, or Guillaume, which therefore tell us nothing. ... A toponym as part of a name may indicate a place of origin (Marie de France) or domicile (Chrestien de Troyes) or feudal dependence (Bernart de Ventadorn). ... Moreover, there is a frequent failure to distinguish clearly between the categories of author, reciter, and scribe, as in the case of Turol, who signed the Oxford manuscript of *La Chanson de Roland*. It would perhaps be safer, except when there is clear proof otherwise, that the word "author" covers all three of these overlapping meanings. ... In the early period, pre-1100, the very notion of authorship seems to disappear. ... Authorship at this date implies continuation, not invention.³³

As I have repeatedly pointed out, none of the theories of authorial anonymity in medieval European literature can be extended to the literary cultures of classical Islam in which composers of lyric and narrative verse were associated with specific works. They were not anonymous scribes; their names – and a fair amount of biographical information about them – were known to both *literati* and artistic patrons. Biographical dictionaries about poets, scholars, and other authors appeared as early as the 9th century CE among Muslims. Ibn Sallām al-Jumahī's (d. 847 CE) *Tabaqāt al-Fuhūl al-Shu'arā'* (The Classes of Master Poets) and the great biographical dictionary of literary figures by Yāqūt (1179–1229 CE), are only two of the many in which poets and *literati* of the classical Muslim lands are identified in entries that sometime run to over 100 pages of information.³⁴ Ibn al-Nadīm, a bibliophile and stationer in Baghdad, who composed his famous *al-Fihrist* (Catalogue) in the 10th century CE, has preserved the names of many classical authors who produced narrative works in prose and in poetry. Among these, he mentions Ibn al-Muqaffa^c (d. circa CE 759), Sahl ibn Hārūn (d. 830 CE), 'Alī b. Dāwūd (mid-8th century CE), and the official, Jahshiyārī (d. 942 CE), who compiled a collection of Arabic, Persian, Greek, and other tales.³⁵ Classical Muslim scholars who consulted works were mindful of authors' identities. They carefully distinguished anonymous works from those of known authorship, because

authorial identity was an important factor in assessing the dependability of sources. Collections of unknown authorship did not enjoy the same authority as those whose authors were known.

The fact that authors of classical Persian and Arabic texts are generally far from anonymous has important implications. Classical Muslim literature soon developed the notion of "authorial proprietorship," a concept that did not appear in Europe until the 18th century.⁵⁶ Although no specific "copyright" laws existed *per se* in classical Persian and Arabic, the idea of the proprietary rights of authors may be inferred from many statements that are scattered throughout Islam's classical canon. These rights, as the following account implies, were apparently understood to be part of the author's estate. For instance, we know that shortly after the year 1058 CE, when the historian Bayhaqī was writing his history of the Ghaznavids in which he had liberally quoted the works of another historian, Mahmūd the Stationer, he had to stop using Mahmūd's work in response to the objections of the latter's inheritors who asserted their proprietary rights to their father's work.⁵⁷ Bayhaqī's report implies that the proprietary rights of Mahmud the Stationer are recognized in Iran during the first half of the 11th century CE. This is some six hundred years before the *Donaldson v. Becket* decision by the English House of Lords laid the grounds for subsequent copyright law in Europe. We should also note Ferdowsi's own lament at the end of his great epic, about how men of means copied his work without giving him anything but praise. Implicit in his complaint is the sense of entitlement to some financial reward for the work of narrative poetry that he produced (in Khaleqi-Motlagh's new editorial edition, see viii: 486: 877-82):

When five and sixty years had passed me by
I viewed my task with more anxiety,
And as my yearning to achieve it grew
My fortune's star receded from my view.
Persians well read and men of high degree
Wrote all my work out and would take no fee.
I over-looked from afar, and thou hadst said
That they had rather handselled me instead!
Naught but their praises had I for my part,

And while they praised, I had a broken heart.
 The mouths of their old money-bags were tied,
 Whereat mine ardent heart was mortified.

In view of this evidence, drawing analogies between Iran's literary epic and medieval French or English vernacular literatures, or insinuating that classical Persian narrative poetry was not the work of specific authors would be impossible to believe. The Neo-Orientalist assertion that oral tradition played a role in the *Shāhnāma's* textual transmission depends on Eurocentric prejudice and false analogy. It reflects a one-size-fits-all mentality that takes no account of either context or culture.

As I hope to have demonstrated by now, students of medieval European literatures developed their ideas about the instability of their texts from a careful examination of the manuscript traditions at their disposal. Specific features of these traditions led them to their conclusions about the anonymity of the author and the important role that scribes, reciters, and performers played in the transmission of medieval European texts. These scholars did *not* impose a preconceived model upon their textual tradition from outside that tradition. By contrast, those who attempt to apply the *mouvance* theory to the *Shāhnāma* present no manuscript evidence at all. They expect to convince us by analogical reasoning alone. Their sweeping generalisations about the manuscript tradition of Iran's national poem are methodologically flawed. They are flawed because they rely on the kind of prejudicial reasoning that insists on equating the highly literate classical Muslim culture with the sub-literate cultures of medieval Europe.

Two circumstances should be present before we can think of any manuscript tradition in terms of *mouvance*. First, the cultural context under which that textual tradition was created must allow the kinds of textual re-creations and instabilities that are implied in *mouvance*. And second, the codices in that manuscript tradition must display such vast textual variation that a single author or a fixed primary text may be reasonably ruled out. Moreover, the variations in that manuscript tradition must be of a kind that cannot be explained in terms of the usual scribal practices. Given these conditions, it may be justifiable to consider different "performances" or diverse artistic "re-creations" (*mouvance*) to be

at work behind the textual variants of a given manuscript tradition. By contrast, if variations in that manuscript tradition are insignificant, or if they may be explained by recourse to the usual scribal practices, then there is no cause to invoke either orality or *mouvance*. No special pleading can alter the simple historical and linguistic facts that the *Shāhnāma*'s manuscript tradition is so conservative as to be virtually immobile, let alone "*mouvant*." Since I have discussed the statistical features of the poem's manuscript tradition in some detail elsewhere,⁵⁸ I will not labor the point here.

Let me end this short essay by relating an observation that stresses the importance of cultural context in assessing any manuscript tradition, and also recalls the personality of the great scholar to whose memory this volume is dedicated. Professor Masoumi Hamadani is a permanent member of the Iranian Academy of Language and Literature. In his obituary to Iraj Afshar, he wrote:

I want to show one of Afshar's typical characteristics by posing a hypothetical question. If most of us were asked, "what would make you happier; the discovery of the lost books of Bayhaqi's history, or the discovery of the personal diaries of a resident of the city of Ghazna who lived in the 10th century; diaries in which the man had recorded his annual expenditures?" Most of us would respond that our joy at the discovery of the lost parts of Bayhaqi's great history could not possibly be compared to what the news of the discovery of some nameless citizen's diaries would excite in us. But I think that Iraj Afshar could not answer this question as easily as the rest of us could. This is because his idea of history was not limited to the accounts of great events, such as wars, victories, defeats, etc. What was important to him was the evidence of the material as well as the spiritual lives of the communities that he studied.⁵⁹

My experience of over a quarter of a century of friendship and study with Iraj Afshar tells me that Professor Masoumi is quite right. Context in analysis of historical events was very important to Afshar; and the imaginary diaries in Professor Masoumi's question could provide that context for our departed friend. Context is as essential in textual editing as it is in historical studies. Knowing under what circumstances our manuscripts were produced, who produced them, and how they were

transmitted, is as important as ascertaining their dates or determining the relative authority of their texts. Attention to these contexts is what seems to be lacking in some recent pronouncements on *Shāhnāma* editing.

NOTES

¹ M. G. Carter, "Arabic Literature," in *Scholarly Editing, A Guide to Research*. Ed. D. C. Greetham, New York: Modern Language Association of America, 1995, pp. 547, 553.

² Aside from the now classic essay by Franz Rosenthal. *The Technique and Approach of Muslim Scholarship*. Analecta Orientalia 24. Rome: Pontificum Institutum Biblicum, 1947, one might point to the magisterial works of Muhammad 'Abd al-Salām Hārūn, and Ayman Fu'ād Sayyid's *Le Manuscrit Arabe et la Codicologie*. 2 vols, Le Caire: al-Dār al-Misriyya al-Lubnāniyya, 1997 (in Arabic) to which I refer below. See also bibliographical references in Adam Gacek's *The Arabic Manuscript Tradition: A Glossary of Technical Terms and Bibliography*. Leiden: Brill, 2001, especially pp. 256-261 and "Taxonomy of Scribal Errors and Corrections in Arabic Manuscripts," in *Theoretical Approaches to the Transmission and Edition of Oriental Manuscripts*. Ed. Judith Pfeiffer and Manfred Kropp, Beirut: Ergon Verlag Würzburg, 2007, pp. 217-235.

³ Al-Jāhiz, al-Hayawān. 8 volumes, M. cA. Hārūn, ed. Cairo: Halabī, vol. 1, pp. 79 and 88.

⁴ See the account in:

القاضي الحسن بن عبدالرحمن الرامهرمزي. المحدث الفاضل بين الزاوي والواعي. قدم له وحققه الدكتور محمد عجاج الخطيب. بيروت: دار الفكر 1391/1971، ص

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⁵ Theodor E. Mommsen, "Petrarch's Conception of the 'Dark Ages'," in *Medieval and Renaissance Studies*, p. 106. This paper was originally published in *Speculum* 17(1942):226-242.

⁶ See Anthony Grafton's essay on "Middle Ages" in *Dictionary of the Middle Ages*, general editor Joseph R. Strayer, New York: Scribner, 1982-1989

⁷ Cantor, *Inventing*, p. 20.

⁸ Davis, *History of Medieval Europe*, p. 203.

⁹ Joseph R. Strayer, *Western Europe in the Middle Ages, A Short History*, 2nd edition, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1974, p. 4.

¹⁰ W. F. H. Nicolaisen, "Introduction," in *Oral Tradition in the Middle Ages*, W. F. H. Nicolaisen, ed. Binghamton NY: Medieval and Renaissance Texts and Studies, 1995, pp. 1–6.

¹¹ Davis's review of *Shāhnāma: The Visual Language of the Persian "Book of Kings"*. In *Speculum* 81(2006)3:862.

¹² Olga Davidson, "The Text of Ferdowsi's *Shāhnāma* and the Burden of the Past," in *Journal of the American Oriental Society*, vol. 118, 1998, no. 1, p. 64.

¹³ Mary B. Speer, "Wrestling with Change: Old French Textual Criticism and Mouvance," *Olifant* 7(1980)4:311–27; also see her comments in "Textual Criticism Redivivus," *L'Esprit Créateur* 23(1983)1: 43–44; and cf. her discussion of the concept in her "Old French Literature," in *Scholarly Editing: A Guide to Research*, ed. D. C. Greetham (New York: MLA, 1995):402–405; See also, Peter F. Dembowski, "The 'French' Tradition of Textual Philology and its Relevance to the Editing of Medieval Texts," in *Modern Philology*, vol. 90, No. 4, 1993, pp. 512–532; Roy Rosenstein, "Mouvance and the Editor as Scribe: *Trascrittore Tradittore?*" in *Romanic Review*, vol. 80, No. 2 (1989), pp. 157–170.

¹⁴ A. E. Housman, "The Application of Thought to Textual Criticism," in *Proceedings of the Classical Association*, vol. 18 (1921), pp. 67–84. The quotation occurs on p. 68.

¹⁵ Reynolds, L. D. and Wilson, N. G, *Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature*. 2nd revised edition, Oxford: Clarendon Press, 1974, p. 212

¹⁶ There are a number of interesting papers dealing with the European vernacular literature in *Mosaic* vol. 8, no. 4, 1975, which is devoted to the rise of the vernacular literatures in medieval Europe. Zumthor's own contribution to this volume, "Birth of a Language and Birth of a Literature," is of considerable theoretical interest (pp. 195–206).

¹⁷ Carol Braun Pasternack, *The Textuality of Old English Poetry*, Cambridge: Cambridge Univ. Press, 1995, p. 2.

¹⁸ Michel Foucault, "What is an Author," in *Language, Counter-Memory, Practice: Selected Essays and Interviews*, edited and translated by Donald F. Bouchard and Sherry Simon, Ithaca, 4th printing,

NY: Cornell Univ. Press, 1986, pp. 113–139, see p. 125.

¹⁹ Geoffrey Chaucer, *The Book of Troilus and Criseyde*, ed. Robert Kilburn Root, Princeton: Princeton Univ. Press, 1945, p. 402.

²⁰ The English translation is from Geoffrey Chaucer, *Troilus and Criseyde*, translated into modern English by Nevill Coghill, Penguin, 1971, pp. 306–307.

²¹ A. J. Minnis, V. J. Scattergood, and J. J. Smith, *Oxford Guides to Chaucer: The Shroter Poems*, Oxford: Clarendon Press, 1995, p. 501.

²² Prose English translation by Gerard NeCastro. See <http://www.umm.maine.edu/faculty/necastro/chaucer/translation>.

²³ Mark Rose, "The Author as Proprietor: *Donaldson v. Becket* and the Genealogy of Modern Authorship," *Representations*, 23 (Summer 1988) 51–85, see p. 51.

²⁴ Pasternack, *Textuality*, p. 1.

²⁵ Pasternack, *Textuality*, p. 9.

²⁶ Zumthor, "Birth of a Language and Birth of a Literature," p. 204.

²⁷ Katherine O'Brien O'Keeffe, *Visible Song: Transitional Literacy in Old English Verse*, Cambridge Studies in Anglo-Saxon England 4, Cambridge: Cambridge UP, 1990, p. 21, cited in Pasternack, p. 5.

²⁸ Pasternack, *Textuality*, pp. 12–13.

²⁹ Pasternack, *Textuality*, pp. 7–8, and see also M. Lapidge, "Textual Criticism and the Literature of Anglo-Saxon England," in *Bulletin of the John Rylands University Library of Manchester*, vol. 73, 1991, pp. 17–45, especially pp. 41–42.

³⁰ Lapidge, "Textual Criticism," p. 30.

³¹ A. N. Doane, "Oral Texts, Intertexts, and Intratexts: Editing Old English," in *Influence and Intertextuality in Literary History*, ed. E. Rothstein and J. Clayton, Madison WI: Univ. of Wisconsin Press, 1991, pp. 75–113, the quotation is from p. 86, quoted in Pasternack, p. 3.

³² Katherine O'Brien O'Keeffe, *Visible Song*, p. 7, see also p. 21.

³³ *Ibid.*, p. 193.

³⁴ Paul Zumthor, *Toward a Medieval Poetics*, translated by Ph. Bennett, Minneapolis: University of Minnesota Press, 1992, pp. 41–49; see especially, p. 48.

³⁵ Mary B. Speer, "Wrestling with Change", p. 317.

³⁶ Jean Rychner, *La Chanson de geste: essai sur l'art épique de jongleurs*, PRF (Geneva: Droz, 1955), 29, 32, 33, 48; cited in Speer, "Wrestling with Change", 317.

³⁷ Speer, "Wrestling with Change" p. 317, n.14.

³⁸ Speer, "Wrestling with Change", p. 317, and see Jean Rychner, *Contribution à l'étude des fabliaux: variantes, remaniements, dégradations* (Neuchâtel: Faculté des Lettres, 1960), I, 131.

³⁹ For a list of such works see Speer, "Wrestling with Change", p. 316.

⁴⁰ Zumthor, *Essai de Poétique Médiévale*, Paris: Éditions du Seuil, 1972, p. 507:

Le caractère de l'oeuvre qui, comme telle, avant l'âge du livre, ressort d'une quasi-abstraction, les textes concrets qui la réalisent présentant, par le jeu des variantes et remaniements, comme une incessante vibration et une instabilité fondamentale.

quoted in Speer, "Wrestling with Change", p. 317. English translation from Doane, "Oral Texts,..." p. 105, note 3.

⁴¹ Zumthor, *Tward a Medieval Poetics*, trns. Philip Bennet, Menneapolis and Oxford: University of Minneapolis Press, 1992, p. 46.

⁴² Zumthor, *Essai*, p. 73; English translation from Zumthor, *Toward a Medieval Poetics*, pp. 47-48.

⁴³ Speer, "Textual Criticism", pp. 40-42

⁴⁴ See Ruth H. Webber's review of John S. Geary's *Formulaic Diction in the Poema de Fernán González and the Mocedades de Rodrigo: A Computer-Aided Analysis*, in *Modern Philology*. Vol.80, 1983, no.3, p. 301.

⁴⁵ Paul Zumthor, *La lettre et l'avoix doe la "littérature" médiévale*, Paris: Editions du Seuil, 1987, see especially the section entitled "Intervocalité et mouvance" on pp. 160-168.

⁴⁶ David Crystal, *The Cambridge Encyclopedia of the English Language*, 2nd edition, NY: Cambridge Univ. Press, 2003, p. 30.

⁴⁷ Crystal, *The Cambridge Encyclopedia of the English Language*, p. 40.

⁴⁸ Margaret M. Roseborough, *An Outline of Middle English Grammar*, Westport, Connecticut: Greenwood Press Publishers, 1970, see appendix I.

⁴⁹ Geoffrey Chaucer, *The Book of Troilus and Criseyde*, ed. Robert Kilburn Root, Princeton: Princeton Univ. Press, 1945, p. 402.

⁵⁰ The English translation is from Geoffrey Chaucer, *Troilus and Criseyde*, translated into modern English by Nevill Coghill, Penguin, 1971, pp. 306–307.

⁵¹ Paul Zumthor, "Comments on H. R. Jauss's Article," *New Literary History*, 10(1979)2:371.

⁵² A. J. Minnis, *Medieval Theory of Authorship: Scholastic Literary Attitudes in the Later Middle Ages*, London: Scholar Press, 1984, p. 219.

⁵³ Zumthor, *Toward A Medieval Poetic*, pp. 40–43.

⁵⁴ ياقوت بن عبدالله الحموي، معجم الادباء: ارشاد الارب الى معرفة الاديب، تحقيق احسان عباس، ٧ ج، الطبعة الاولى، بيروت: دار الغرب الاسلامي، 1993؛ محمد بن سلام الجمحي، طبقات فحول الشعراء، قرأه و شرحه محمود محمد شاكر، ٨ ج، القاهرة: مطبعة الميداني، 1973.

⁵⁵ ابن النديم، محمد بن اسحاق. كتاب الفهرست. تحقيق رضا تجدد. طبع دوم، تهران: اساطير، 1381، ص 363 - 364.

⁵⁶ Mark Rose, "The Author as Proprietor: *Donaldson v. Becket* and the Genealogy of Modern Authorship," *Representations*, 23 (Summer 1988) 51–85, see p. 51.

⁵⁷ بيهقي، ابوالفضل. تاريخ بيهقي. به تصحيح علي اكبر فياض. مشهد: دانشگاه فردوسي، 2536، صص 341 - 342.

⁵⁸ See M. Omidasalar, "Orality, Mouvanace, and Editorial Theory in *Shāhnāma* Studies," in *Jerusalem Studies in Arabic and Islam*, vol.27 (2002), pp. 272-79.

⁵⁹ See:

حسين معصومي همداني، "لجدرک تاريخ"، لجه مهنرنامه، ج ٥٢، بهشت 1390، شماره ١١، ص 208.

Shaykh Hasan Bulghārī & His Maqāmāt

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SALĀH AL-DĪN HASAN NAKHJAWĀNĪ known as Bulghārī, was one of the most distinguished Sufi masters of the Suhrawardiyya order during the 7th/13th century. At the request of a number of the Shaykh's disciples, Muhammad Zaynī or Zaynabī, a close companion of the Shaykh, compiled his master's life scenes, as well as his spiritual states (*ahwāl*) and utterances – which occasionally bear resemblance to *shariyāt* ('ecstatic expressions') – in a work entitled *Maqāmāt* ('The [Mystical] Stations'). The manuscript of this work, preserved in the Institute of Oriental Studies and Manuscripts in Tajikistan (MS no. 4036), is actually the most important key source of Shaykh Hasan's life. The article in *Danishnāmah-yi jahān-i Islām*, under Bulghārī Nakhjawānī, is based only on later sources, like *Rawzāt al-jannāt* by Ibn Karbalāī and *Rashahāt 'ayn al-hayāt* by Wā'ez Kāshifī, as well as some scattered researches of 'Abbās Iqbāl Ashtiyānī. In addition, some pages are missing in this manuscript.

While referring to the various titles (*alqāb*) of the Shaykh which prove his high status in both *sharī'a* (formal Law) and *tarīqa* (spiritual path), the author of *Maqāmāt* states that these collected sayings are based on what he had heard from the Shaykh as well as on some of his words recorded by a number of his other significant disciples. Among them was Shaykh Najm al-Dīn, whom the author of *Maqāmāt* describes as the Shaykh's "scribe of occurrences" (*kātib-i wāqi'āt*) (folio

74a). *Maqāmāt* is divided into three parts: the Shaykh's life and spiritual states, his correspondence and the explanation of the occurrences (*sharh-i wāqī'āt*). The author explicitly states that the contents of the last two parts are the words of the Shaykh himself (folios 11a, b). The paternal grandfather of the Shaykh, known as Shaykh Salmān, was also a Sufi, whose tomb is in Hamadān, but, Khwāja 'Umar Birinj Furūsh ('The Rice Merchant'), the Shaykh's father – as his title shows – was involved in commercial activities. It appears that his family migrated to Nakhjawān, where Hasan was born. Hasan was 11 years old when, along with his father and brother, Husayn (folio 49b), moved to Khuy with the intention to continue his education in high school (*dabtristān*) (folios 12a, b). As can be surmised from some scattered indications of the Shaykh, for a short period and apparently due to Khwaja 'Umar's death, he had suffered from indigence (folio 12b, 13a). At the age of 23, Hasan was captured by the Mongols and spent 7 years among them, but apparently was in captivity only for 3 years, and for the remaining 7 years he was busy with trade and could earn some money (folios 13b; 14a; 20a). His title as *mard-i lashkargāh* ('Man of Military Camp') or *lashkarī* ('the Military') (folio 48a, 49b), is probably related to the same period of his life. It also appears that Hasan's life as a Sufi began in this same interval. It is explicitly suggested by the *Maqāmāt* that after those 7 years and being inspired by "a beloved one whose appearance was strikingly like that of his father", Hasan headed toward Darband of Baku. Afterwards, he made up his mind to move to Bulghār but a certain 'call' prevented him from travelling. Considering the facts that the Shaykh had once said that from that day, "when he was honored through a *jadhba* ('attraction by God')", his life span, like that of the Prophet Muhammad, would be 63 years, in the end his death occurred in 698/1298-1299 (at the age of 93), meaning the *jadhba* should have occurred in the year 635/1237-1238. As it may be, Hasan, along with a caravan including some people from Ālān, moved to Arūs. During the journey, the Shāfi'is of the caravan regarded him as their leader (folios 20a, b; 21a, b). Afterwards he went to Bulghār where he began to spread spiritual guidance and found a number of significant disciples, among them being Shaykh 'Uthmān Fuqqā'i, renowned for his lofty spiritual status

and his numerous 'acts of grace' (*karāmāt*). After 9 years of offering guidance and travelling in Arūs and Bulghār (folios 24b, 25b), the Shaykh moved to Bukhārā where he was called the 'Shaykh of Bulghār' (folio 25b). As suggested by the *Maqāmāt*, after a few years (taking into account some historical facts probably more than 4 years), the Shaykh desired to return to Bulghār and left Bukhara for Bulghār. After 3 years, the Shaykh returned to Bukhārā and lived there for 20 years (folio 65a).

During the Shaykh's accommodation in Bukhārā, Barka Khān, the Mongol Muslim ruler of the Western Qibchāq (r. 655-664/1257-1266), became one of the people who held the Shaykh in high esteem and invited him to Qibchāq and said that if the Shaykh was unable to come, he could pay a visit to him in Bukhārā. The Shaykh did not go to Qibchāq, but by sending some meaningful and dervish-like gifts to Barka Khān, he tried to tell him that Sartāq, his nephew and rival, would die and Barka Khān would come to the throne (folio 29a). During the conflicts between the Mongol families in the second half of the 7th/13th century, Bukhārā was invaded and occupied many times. As indicated in the *Maqāmāt*, since the Shaykh expected the turmoil, he ordered a number of his companions to move to Khurāsān, although a few of them including Khwāja Akbar, the Shaykh's son, were killed during one of the Mongol invasions in Khurāsān. At that time Shaykh Hasan was staying in the Umayyad stronghold of Bukhārā and when the Mongols invaded the city, he spread his protecting veil over the people and brought them to his stronghold, but, after the destruction of the city (probably by the forces of Abāqā Khān in 671/1272), the Shaykh moved to Khurāsān. He ordered some of his disciples to stay in Nayshābūr and he travelled to Kirmān. On his way, the Shaykh left some of his disciples in different cities and along with two of his companions arrived in Kirmān where he resided at the *Jāmi'* ('Congregational Mosque') of the city (folios 65b, 66a, b). It is said that the Qutlugh Tarkān Khātūn, the Qarākhataī ruler of Kirmān (r. 655-681/1257-1282), who did not believe in the Sufi Shaykhs of Kirmān, after seeing the movements and gestures of Shaykh Hasan and hearing his words, became one of the people who held him in high esteem (folios 66b, 67b) and instructed the building of a *khānaqāh* ('Sufi

of the Mongol invasion, under Hulākū Khan and throughout the Ilkhānid period as well as the events of Kirmān, during the rule of Tarkān Khātūn.

